HUMAN ANATOMY (CODE: AN)

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
Human Anatomy									
Topic: Anatomical terminology		**Number of competencies: (2)**				**Number of procedures for certification: (NIL)**			
AN1.1	**Demonstrate normal anatomical position, various planes, relation, comparison, laterality & movement in our body.** **Objectives-** 1) At the end of session the phase 1 students must define the normal anatomical position correctly. 2) At the end of session the phase 1 students must define various planes accurately. 3) At the end of session the phase 1 students must define the movements of the body correctly. 4) At the end of session the phase 1 students must enumerate the various movements possible on different joints of body correctly. 5) At the end of session the phase 1 students should demonstrate the anatomical position correctly. 6) At the end of session the phase 1 students should demonstrate the laterality correctly. 7) At the end of session the phase 1 students should present the anatomical position and movements of all joints correctly.	K/S	SH	Y	Lecture, DOAP session	Written/ Viva voce/skills assessment			
AN1.2	**Describe composition of bone and bone marrow.** **Objectives –** 1) At the end of session the phase 1 students must define the bone accurately. 2) At the end of session the phase 1 students must define the bone marrow accurately. 3) At the end of session the phase 1 students must describe the composition of bone correctly. 4) At the end of session the phase 1 students must describe the composition of bone marrow correctly. 5) At the end of session the phase 1 students must be able to differentiate between different types of bones on the basis of composition correctly.	K	KH	Y	Lecture	Written/ Viva voce			
Topic: General features of bones & Joints		**Number of competencies: (6)**				**Number of procedures for certification: (NIL)**			

AN2.1	**Describe parts, blood and nerve supply of a long bone.** **Objectives-** 1) At the end of session the phase 1 students must define the parts of a long bone correctly. 2) At the end of session the phase 1 students must describe the blood supply of long bone correctly. 3) At the end of session the phase 1 students must describe the nerve supply of long bone correctly.	K	KH	Y	Lecture, DOAP session	Written/ Viva voce			
AN2.2	**Enumerate laws of ossification.** **Objectives –** 1) At the end of session the phase 1 students should be able to describe the laws of ossification accurately. 2) At the end of session the phase 1 students should be able to enumerate the ossification centers of bones accurately.	K	KH	N	Lecture	Written			
AN2.3	**Enumerate special features of a sesamoid bone.** **Objectives-** 1) At the end of session the phase 1 students must define the sesamoid bone correctly. 2) At the end of session the phase 1 students must describe the development of sesamoid bone correctly. 3) At the end of session the phase 1 students must enumerate the characteristics of sesamoid bone accurately.	K	KH	N	Lecture	Written			
AN2.4	**Describe various types of cartilage with its structure & distribution in body.** **Objectives-** 1) At the end of session the phase 1 students must define the cartilage accurately. 2) At the end of session the phase 1 students must list the three types of cartilage. 3) At the end of session the phase 1 students must describe the structure of three types of cartilages. 4) At the end of session the phase 1 students must discuss the distribution of cartilage accurately.	K	KH	Y	Lecture	Written/ Viva voce		Orthopedics	
AN2.5	**Describe various joints with subtypes and examples.** **Objectives-** 1) At the end of session the phase 1 students must define the joint correctly. 2) At the end of session the phase 1 students must classify the joints in subtypes on the basis of axis accurately. 3) At the end of session the phase 1 students must classify the joints in subtypes on the basis of structure accurately. 4) At the end of session the phase 1 students must classify the joints in subtypes on the basis of function accurately. 5) At the end of session the phase 1 students must define	K	KH	Y	Lecture	Written/ Viva voce		Orthopedics	

	the fibrous joints correctly. 6) At the end of session the phase 1 students must define the cartilaginous joints correctly. 7) At the end of session the phase 1 students must define the synovial joint correctly. 8) At the end of session the phase 1 students must list the examples of various subtypes of joints correctly.								
AN2.6	**Explain the concept of nerve supply of joints & Hilton's law.** **Objectives-** 1) At the end of session the phase 1 students must describe the concept of nerve supply of joints correctly. 2) At the end of session the phase 1 students must describe the Hilton's law correctly.	K	KH	Y	Lecture	Written/ Viva voce			
Topic: General features of Muscle		**Number of competencies: (3)**				**Number of procedures for certification: (NIL)**			
AN3.1	**Classify muscle tissue according to structure & action** **Objectives-** 1) At the end of session the phase 1 students must define the muscle tissue correctly. 2) At the end of session the phase 1 students must classify the muscle tissue according to structure correctly. **3)** At the end of session the phase 1 students must classify the muscle tissue according to function correctly.	K	KH	Y	Lecture	Written/ Viva voce			Physiology
AN3.2	**Enumerate parts of skeletal muscle and differentiate between tendons and aponeuroses with examples.** **Objectives-** 1) At the end of session the phase 1 students must enumerate the parts of skeletal muscle correctly. 2) At the end of session the phase 1 students must define the tendon correctly. 3) At the end of session the phase 1 students must define the aponeuroses correctly. 4) At the end of session the phase 1 students must differentiate between tendons and aponeuroses with examples correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN3.3	**Explain Shunt and spurt muscles.** **Objectives-** **1)** At the end of session the phase 1 students must define the shunt correctly. **2)** At the end of session the phase 1 students must enumerate the types of shunt correctly. **3)** At the end of session the phase 1 students must define the spurt muscles correctly**.**	K	KH	N	Lecture	Written			
Topic: General features of skin and fascia		**Number of competencies: (5)**				**Number of procedures for certification:**			

					(NIL)				
AN4.1	**Describe different types of skin & dermatomes in body.** **Objectives-** 1) At the end of session the phase 1 students must define the types of skin correctly. 2) At the end of session the phase 1 students must define the layers of skin correctly. 3) At the end of session the phase 1 students must define the dermatomes of body correctly. 4) At the end of session the phase 1 students must enumerate the dermatomes of body accurately.	K	KH	N	Lecture, DOAP session	Written			
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN4.2	**Describe structure & function of skin with its appendages.** **Objectives-** 1) At the end of session the phase 1 students must describe the layers of skin correctly. 2) At the end of session the phase 1 students must describe the functions of skin correctly. 3) At the end of session the phase 1 students must enumerate the appendages of skin correctly. 4) At the end of session the phase 1 students must describe the appendages correctly.	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		Dermatology, Venereology & Leprosy	
AN4.3	**Describe superficial fascia along with fat distribution in body.** **Objectives-** 1) At the end of session the phase 1 students must define the superficial fascia correctly. 2) At the end of session the phase 1 students must describe the layers of superficial fascia correctly. 3) At the end of session the phase 1 students must describe the distribution of fat in body correctly.	K	KH	Y	Lecture, DOAP session	Written/ Viva voce			
AN4.4	**Describe modifications of deep fascia with its functions.** **Objectives-** 1) At the end of session the phase 1 students must define the deep fascia correctly. 2) At the end of session the phase 1 students must describe the modifications of deep fascia correctly. 3) At the end of session the phase 1 students must describe the functions of deep fascia correctly.	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		Dermatology, Venereology & Leprosy	
AN4.5	**Explain principles of skin incisions.** **Objectives-** 1) At the end of session the phase 1 students must enumerate the types of skin incision correctly.	K	KH	N	Lecture	Written		Dermatology, Venereology & Leprosy	

	2) At the end of session the phase 1 students must describe the principles of skin incision correctly.								
Topic: General features of the cardiovascular system		**Number of competencies: (8)**				**Number of procedures for certification: (NIL)**			
AN5.1	**Differentiate between blood vascular and lymphatic system.** **Objectives-** 1) At the end of session the phase 1 students must define the vascular system correctly. 2) At the end of session the phase 1 students must enumerate the components of vascular system correctly. 3) At the end of session the phase 1 students must define the lymphatic system correctly. 4) At the end of session the phase 1 students must enumerate the components of lymphatic system correctly. 5) At the end of session the phase 1 students must differentiate between blood vascular and lymphatic system correctly.	K	KH	Y	Lecture	Written/ Viva voce			Physiology
AN5.2	**Differentiate between pulmonary and systemic circulation.** **Objectives-** **1)** At the end of session the phase 1 students must define pulmonary circulation correctly. **2)** At the end of session the phase 1 students must define the systemic circulation correctly. **3)** At the end of session the phase 1students must differentiate between pulmonary and systemic circulation correctly.	K	KH	Y	Lecture	Written/ Viva voce			Physiology
AN5.3	**List general differences between arteries & veins.** **Objectives-** **1)** At the end of session the phase 1 students must define the artery correctly. **2)** At the end of session the phase 1 students must define the general features of artery correctly. **3)** At the end of session the phase 1 students must define the vein correctly. **4)** At the end of session the phase 1 students must define the general features of vein correctly. **5)** At the end of session the phase 1 students must enumerate the differences between arteries and vein correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN5.4	**Explain functional difference between elastic, muscular arteries and arterioles.** **Objectives-** **1)** At the end of session the phase 1 students must define the elastic artery correctly. **2)** At the end of session the phase 1 students must define the muscular artery correctly. **3)** At the end of session the phase 1 students must define the arterioles correctly. **4)** At the end of session the phase 1 students must differentiate between the functions of elastic, muscular arteries and	K	KH	Y	Lecture	Written/ Viva voce			

	arterioles correctly.								
AN5.5	**Describe portal system giving examples.** **Objectives-** **1)** At the end of session the phase 1 students must define the portal system correctly. **2)** At the end of session the phase 1 students must enumerate the veins participating in portal circulation correctly. **3)** At the end of session the phase 1 students must enumerate the examples of portal circulation correctly. **4)** At the end of session the phase 1 students must describe the clinical importance of portal circulation correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN5.6	**Describe the concept of anastomoses and collateral circulation with significance of end-arteries.** **Objective-** 1) At the end of session the phase 1 students must define the anastomoses correctly. 2) At the end of session the phase 1 students must enumerate the types of anastomoses correctly. 3) At the end of session the phase 1 students must define collateral circulation correclty. 4) At the end of session the phase 1 students must define end arteries correctly. 5) At the end of session the phase 1 students must discuss the clinical significance of anastomoses correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Physiology
AN5.7	**Explain function of meta-arterioles, precapillary sphincters, arterio-venous anastomoses.** **Objective-** 1) At the end of session the phase 1 students must define the meta-arterioles correctly. 2) At the end of session the phase 1 students must define the precapillary sphincter correctly. 3) At the end of session the phase 1 students must define the arterio-venous anastomoses correctly. 4) At the end of session the phase 1 students must define the function of meta-arterioles correctly. 5) At the end of session the phase 1 students must define the function of precapillary sphincter correctly. 6) At the end of session the phase 1 students must define the function of arterio-venous anastomoses correctly.	K	KH	N	Lecture	Written			Physiology
AN5.8	**Define thrombosis, infarction & aneurysm.** **Objective-** 1) At the end of session the phase 1 students must define the thrombosis correctly.	K	KH	N	Lecture	Written		Pathology	Physiology

	2) At the end of session the phase 1 students must define the infarction correctly. 3) At the end of session the phase 1 students must define the aneurysm correctly. 4) At the end of session the phase 1 students must discuss the applied anatomy of thrombosis correctly. 5) At the end of session the phase 1 students must discuss the applied anatomy of infarction correctly. 6) At the end of session the phase 1 students must discuss the applied anatomy of aneurysm correctly.								
Topic: General Features of lymphatic system		**Number of competencies: (3)**				**Number of procedures for certification: (NIL)**			
AN6.1	**List the components and functions of the lymphatic system.** **Objectives-** **1)** At the end of session the phase 1 students must define the lymphatic system correctly. **2)** At the end of session the phase 1 students must list the components of lymphatic system correctly. **3)** At the end of session the phase 1 students must discuss the functions of lymphatic system correctly. **4)** At the end of session the phase 1 students must discuss the clinical applied of lymphatic system correctly.	K	KH	N	Lecture	Written			

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AN6.2	**Describe structure of lymph capillaries & mechanism of lymph circulation** **Objectives-** 1) At the end of session the phase 1 students must describe the structure of lymph capillaries correctly. 2) At the end of session the phase 1 students must discuss the mechanism of lymph circulation correctly.	K	KH	N	Lecture	Written			
AN6.3	**Explain the concept of lymphoedema and spread of tumors via lymphatics and venous system.** **Objectives-** 1) At the end of session the phase 1 students must define lymphoedema correctly. 2) At the end of session the phase 1 students must describe the concept of lymphoedema correctly. 3) At the end of session the phase 1 students must discuss the spread of tumors via lymphatics correctly. 4) At the end of session the phase 1 students must discuss the	K	KH	N	Lecture	Written		General Surgery	

	spread of tumors via venous system correctly.								
Topic: Introduction to the nervous system		**Number of competencies: (8)**				**Number of procedures for certification: (NIL)**			
AN7.1	**Describe general plan of nervous system with components of central, peripheral & autonomic nervous systems.** **Objectives-** 1) At the end of session the phase 1 students must enumerate the components of central nervous systems correctly. 2) At the end of session the phase 1 students must enumerate the components of peripheral nervous systems correctly. 3) At the end of session the phase 1 students must enumerate the components of autonomic nervous systems correctly. 4) At the end of session the phase 1 students must discuss the general arrangement of nervous systems correctly.	K	KH	Y	Lecture	Written			
AN7.2	**List components of nervous tissue and their functions.** **Objectives-** 1) At the end of session the phase 1 students must enumerate the components of nervous tissue correctly. 2) At the end of session the phase 1 students must discuss the functions of neurons correctly. 3) At the end of session the phase 1 students must discuss the types of neuroglia cells correctly. 4) At the end of session the phase 1 students must discuss the functions of neuroglia cells correctly.	K	KH	Y	Lecture	Written/ Viva voce			Physiology
AN7.3	**Describe parts of a neuron and classify them based on number of neurites, size & function** **Objectives-** 1) At the end of session the phase 1 students must define the parts of neuron correctly. 2) At the end of session the phase 1 students must discuss the functions of parts of neuron correctly. 3) At the end of session the phase 1 students must classify the neurons on basis of number of neuritis correctly. 4) At the end of session the phase 1 students must classify the neurons on basis of size correctly. 5) At the end of session the phase 1 students must classify the neurons on basis of function correctly.	K	KH	Y	Lecture	Written/ Viva voce			Physiology
AN7.4	**Describe structure of a typical spinal nerve.** **Objectives-** 1) At the end of session the phase 1 students must define a typical spinal nerve correctly. 2) At the end of session the phase 1 students must discuss the	K	KH	Y	Lecture	Written/ Viva voce			

	structure of typical spinal nerve correctly. 3) At the end of session the phase 1 students must discuss the function of typical spinal nerve correctly.								
AN7.5	**Describe principles of sensory and motor innervation of muscles** **Objectives-** 1) At the end of session the phase 1 students must describe the principles of sensory innervation of muscles correctly. 2) At the end of session the phase 1 students must describe the principles of motor innervation of muscles correctly. 3) At the end of session the phase 1 students must describe the reflex arc correctly. 4) At the end of session the phase 1 students must define the neuro-muscular junction correctly.	K	KH	N	Lecture	Written		General Medicine	Physiology
AN7.6	**Describe concept of loss of innervation of a muscle with its applied anatomy.** **Objectives-** 1) At the end of session the phase 1 students must describe the applied anatomy of loss of motor innervation of muscles correctly. 2) At the end of session the phase 1 students must describe the applied anatomy of loss of sensory innervation of muscles correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	
AN7.7	**Describe various type of synapse** **Objectives-** 1) At the end of session the phase 1 students must define the synapse correctly. 2) At the end of session the phase 1 students must enumerate the types of synapse correctly. 3) At the end of session the phase 1 students must define the types of synapse correctly. 4) At the end of session the phase 1 students must describe the applied anatomy of synapse correctly.	K	KH	N	Lecture	Written			Physiology
AN7.8	**Describe differences between sympathetic and spinal ganglia** **Objectives-** 1) At the end of session the phase 1 students must define the ganglia correctly. 2) At the end of session the phase 1students must differentiate the sympathetic and spinal ganglia on basis of location correctly. 3) At the end of session the phase 1students must differentiate the sympathetic and spinal ganglia on basis of function correctly.	K	KH	N	Lecture	Written			

Topic: Features of individual bones (Upper Limb)	Number of competencies: (6)	Number of procedures for certification: (NIL)							
AN8.1	**Identify the given bone, its side, important features & keep it in anatomical position.** **Objectives-** 1) At the end of session the phase 1 students must identify the given bones correctly. 2) At the end of session the phase 1 students must define the side of bone correctly. 3) At the end of session the phase 1 students must enumerate the importance features of bones correctly. 4) At the end of session the phase 1 students must define the anatomical position of bones correctly. 5) At the end of session the phase 1 students must identify the side of bones correctly. 6) At the end of session the phase 1 students must demonstrate the important features of bones correctly. 7) At the end of session the phase 1 students must demonstrate the anatomical position of bones correctly.	K/S	SH	Y	DOAP session	Viva voce/ Practicals/ OSPE			
AN8.2	**Identify & describe joints formed by the given bone** **Objectives-** 1) At the end of session the phase 1 students must enumerate the joints formed by both ends of the given bone correctly. 2) At the end of session the phase 1 students must describe the type of joint formed by both ends of the given bone correctly. 3) At the end of session the phase 1 students must define the articular surfaces on both ends of bone correctly. 4) At the end of session the phase 1 students must enumerate the movements possible on the joint formed by both ends of the given bone correctly. 5) At the end of session the phase 1 students must identify the joints formed by both ends of the given bone correctly. 6) At the end of session the phase 1 students must identify the type of joint formed by both ends of the given bone correctly. 7) At the end of session the phase 1 students must identify the articular surfaces on both ends of bone correctly. 8) At the end of session the phase 1 students must demonstrate the movements possible on the joint formed by both ends of the given bone correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce			
AN8.3	**Enumerate peculiarities of clavicle.** **Objectives-** **1)** At the end of session the phase 1 students must describe the side of clavicle correctly. **2)** At the end of session the phase 1 students must describe the	K	KH	Y	Lecture, DOAP session	Viva voce			

	anatomical features of clavicle correctly. **3)** At the end of session the phase 1 students must describe the characteristic features of clavicle correctly. **4)** At the end of session the phase 1 students must describe the important bony landmarks of clavicle correctly. **5)** At the end of session the phase 1 students must describe the attachments of clavicle correctly. **6)** At the end of session the phase 1 students must describe the ossification of clavicle correctly. **7)** At the end of session the phase 1 students must describe the clinical anatomy of clavicle correctly.								
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN8.4	**Demonstrate important muscle attachment on the given bone** **Objectives-** 1) At the end of session the phase 1 students must describe the site of origin of muscles on the given bone correctly. 2) At the end of session the phase 1 students must describe the site of insertion of muscles on the given bone correctly. 3) At the end of session the phase 1 students must demonstrate the site of origin of muscles on the given bone correctly. 4) At the end of session the phase 1 students must demonstrate the site of insertion of muscles on the given bone correctly.	K/S	SH	Y	Practical DOAP session, Small group teaching	Viva voce Practicals		Orthopedics	
AN8.5	**Identify and name various bones in articulated hand, Specify the parts of metacarpals and phalanges and enumerate the peculiarities of pisiform.** **Objectives-** 1) At the end of session the phase 1 students must enumerate the carpal bones in articulated hand correctly. 2) At the end of session the phase 1 students must demonstrate the carpal bones in articulated hand correctly. 3) At the end of session the phase 1 students must describe the parts of metacarpals in articulated hand correctly. 4) At the end of session the phase 1 students must demonstrate the parts of metacarpals in articulated hand correctly. 5) At the end of session the phase 1 students must describe the phalanges in articulated hand correctly. 6) At the end of session the phase 1 students must demonstrate the phalanges in articulated hand correctly. 7) At the end of session the phase 1 students must describe the pecularities of pisiform in articulated hand correctly.	K/S	SH	Y	Practical,F91 DOAP session, Small group teaching	Viva voce Practicals			

AN8.6	**Describe scaphoid fracture and explain the anatomical basis of avascular necrosis** **Objectives-** 1) At the end of session the phase 1 students must enumerate the fractures of scaphoid bone correctly. 2) At the end of session the phase 1 students must discuss the blood bupply of scaphoid bone correctly. 3) At the end of session the phase 1 students must discuss the anatomical basis of complications of scaphoid bone fracture correctly.	K	KH	N	DOAP session	Viva voce		Orthopedics	
Topic: Pectoral region		**Number of competencies: (3)**				**Number of procedures for certification: (NIL)**			
AN9.1	**Describe attachment, nerve supply & action of pectoralis major and pectoralis minor** **Objectives-** 1) At the end of session the phase 1 students must describe the origin of pectoralis major correctly. 2) At the end of session the phase 1 students must describe the insertion of pectoralis major correctly. 3) At the end of session the phase 1 students must describe the nerve supply of pectoralis major correctly. 4) At the end of session the phase 1 students must describe the action of pectoralis major correctly. 5) At the end of session the phase 1 students must describe the origin of pectoralis minor correctly. 6) At the end of session the phase 1 students must describe the insertion of pectoralis minor correctly. 7) At the end of session the phase 1 students must describe the nerve supply of pectoralis minor correctly. 8) At the end of session the phase 1 students must describe the action of pectoralis minor correctly.	K	KH	Y	Lecture, Practical	Written			
AN9.2	**Breast: Describe the location, extent, deep relations, structure, age changes, blood supply, lymphatic drainage, microanatomy and applied anatomy of breast** **Objectives-** 1) At the end of session the phase 1 students must describe the location of breast correctly. 2) At the end of session the phase 1 students must describe the extent of breast correctly. 3) At the end of session the phase 1 students must describe the deep relations of breast correctly. 4) At the end of session the phase 1 students must describe the structure of breast correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	

	5) At the end of session the phase 1 students must describe the age changes of breast correctly. 6) At the end of session the phase 1 students must describe the blood supply of breast correctly. 7) At the end of session the phase 1 students must describe the lymphatic drainage of breast correctly. 8) At the end of session the phase 1 students must describe the microanatomy of breast correctly. 9) At the end of session the phase 1 students must describe the applied anatomy of breast correctly.								
AN9.3	**Describe development of breast** **Objectives-** 1) At the end of session the phase 1 students must describe the stages of development of breast correctly. 2) At the end of session the phase 1 students must describe the congenital anomalies of breast correctly.	K	KH	N	Lecture	Written			
Topic: Axilla, Shoulder and Scapular region		**Number of competencies: (13)**				**Number of procedures for certification: (NIL)**			
AN10.1	**Identify & describe boundaries and contents of axilla** **Objectives-** 1) At the end of session the phase 1 students must describe the boundaries of axilla correctly. 2) At the end of session the phase 1 students must describe the contents of axilla correctly. 3) At the end of session the phase 1 students must describe the applied anatomy of axilla correctly. 4) At the end of session the phase 1 students must identify the location of axilla correctly. 5) At the end of session the phase 1 students must demonstrate the boundaries of axilla correctly. 6) At the end of session the phase 1 students must demonstrate the contents of axilla correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN10.2	Identify, describe and demonstrate the origin, extent, course, parts, relations and branches of axillary artery & tributaries of vein Objectives- 1) At the end of session the phase 1 students must describe the origin of axillary artery correctly. 2) At the end of session the phase 1 students must describe the termination of axillary artery correctly. 3) At the end of session the phase 1 students must describe the course of axillary artery correctly. 4) At the end of session the phase 1 students must describe the parts of axillary artery correctly. 5) At the end of session the phase 1 students must describe the	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	relations of axillary artery correctly. 6) At the end of session the phase 1 students must describe the branches of axillary artery correctly. 7) At the end of session the phase 1 students must describe the applied anatomy of axillary artery correctly. 8) At the end of session the phase 1 students must demonstrate the origin of axillary artery correctly. 9) At the end of session the phase 1 students must demonstrate the termination of axillary artery correctly. 10) At the end of session the phase 1 students must demonstrate the course of axillary artery correctly. 11) At the end of session the phase 1 students must demonstrate the parts of axillary artery correctly. 12) At the end of session the phase 1 students must demonstrate the relations of axillary artery correctly. 13) At the end of session the phase 1 students must demonstrate the branches of axillary artery correctly. 14) At the end of session the phase 1 students must describe the origin of axillary vein correctly. 15) At the end of session the phase 1 students must describe the termination of axillary vein correctly. 16) At the end of session the phase 1 students must describe the course of axillary vein correctly. 17) At the end of session the phase 1 students must describe the parts of axillary vein correctly. 18) At the end of session the phase 1 students must describe the relations of axillary vein correctly. 19) At the end of session the phase 1 students must describe the branches of axillary vein correctly. 20) At the end of session the phase 1 students must describe the applied anatomy of axillary vein correctly. 21) At the end of session the phase 1 students must demonstrate the origin of axillary vein correctly. 22) At the end of session the phase 1 students must demonstrate the termination of axillary vein correctly. 23) At the end of session the phase 1 students must demonstrate the course of axillary vein correctly. 24) At the end of session the phase 1 students must demonstrate the parts of axillary vein correctly. 25) At the end of session the phase 1 students must demonstrate the relations of axillary vein correctly. 26) At the end of session the phase 1 students must demonstrate the branches of axillary vein correctly.								

AN10.3	**Describe, identify and demonstrate formation, branches, relations, area of supply of branches, course and relations of terminal branches of brachial plexus** **Objectives-** 1) At the end of session the phase 1 students must describe the formation of brachial plexus correctly. 2) At the end of session the phase 1 students must describe the branches of brachial plexus correctly. 3) At the end of session the phase 1 students must describe the relations of brachial plexus correctly. 4) At the end of session the phase 1 students must describe the area of supply of branches of brachial plexus correctly. 5) At the end of session the phase 1 students must describe the course of brachial plexus correctly. 6) At the end of session the phase 1 students must describe the relation of terminal branches of brachial plexus correctly. 7) At the end of session the phase 1 students must describe the applied anatomy of brachial plexus correctly. 8) At the end of session the phase 1 students must demonstrate the formation of brachial plexus correctly. 9) At the end of session the phase 1 students must demonstrate the branches of brachial plexus correctly. 10) At the end of session the phase 1 students must demonstrate the relations of brachial plexus correctly. 11) At the end of session the phase 1 students must demonstrate the area of supply of branches of brachial plexus correctly. 12) At the end of session the phase 1 students must demonstrate the course of brachial plexus correctly. 13) At the end of session the phase 1 students must demonstrate the relation of brachial plexus correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN10.4	**Describe the anatomical groups of axillary lymph nodes and specify their areas of drainage.** **Objectives-** 1) At the end of session the phase 1 students must describe the anatomical groups of lymph nodes correctly. 2) At the end of session the phase 1 students must describe the area of drainage of axillary lymph nodes correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	

	3) At the end of session the phase 1 students must describe the applied anatomy of axillary lymph nodes correctly.								
AN10.5	**Explain variations in formation of brachial plexus** **Objectives-** 1) At the end of session the phase 1 students must describe the normal formation of brachial plexus correctly. 2) At the end of session the phase 1 students must describe the variations in formation of brachial plexus correctly. 3) At the end of session the phase 1 students must describe the applied anatomy of brachial plexus correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce			
AN10.6	**Explain the anatomical basis of clinical features of Erb's palsy and Klumpke's paralysis.** **Objectives-** 1) At the end of session the phase 1 students must define Erb's palsy correctly. 2) At the end of session the phase 1 students must define Klumpke's paralysis correctly. 3) At the end of session the phase 1 students must describe the site of injury in Erb's palsy correctly. 4) At the end of session the phase 1 students must describe the site of injury in Klumpke's paralysis correctly. 5) At the end of session the phase 1 students must describe the mode of injury in Erb's palsy correctly. 6) At the end of session the phase 1 students must describe the mode of injury in Klumpke's paralysis correctly. 7) At the end of session the phase 1 students must describe the clinical features in Erb's palsy correctly. 8) At the end of session the phase 1 students must describe the clinical features in Klumpke's paralysis correctly.	K	KH	N	Lecture	Written		General Surgery	
AN10.7	**Explain anatomical basis of enlarged axillary lymph nodes** **Objectives-** 1) At the end of session the phase 1 students must describe the location of axillary group of lymph nodes correctly. 2) At the end of session the phase 1 students must describe the anatomical basis of enlarged axillary lymph nodes correctly. 3) At the end of session the phase 1 students must describe the applied anatomy of enlarged axillary lymph nodes correctly.	K	KH	N	Lecture	Written		General Surgery	
AN10.8	**Describe, identify and demonstrate the position, attachment, nerve supply and actions of trapezius and latissimus dorsi** **Objectives-** 1) At the end of session the phase 1 students must describe the position of trapezius correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	2) At the end of session the phase 1 students must describe the origin of trapezius correctly. 3) At the end of session the phase 1 students must describe the insertion of trapezius correctly. 4) At the end of session the phase 1 students must describe the nerve supply of trapezius correctly. 5) At the end of session the phase 1 students must describe the action of trapezius correctly. 6) At the end of session the phase 1 students must demonstrate the position of trapezius correctly. 7) At the end of session the phase 1 students must demonstrate the origin of trapezius correctly. 8) At the end of session the phase 1 students must demonstrate the insertion of trapezius correctly. 9) At the end of session the phase 1 students must demonstrate the nerve supply of trapezius correctly. 10) At the end of session the phase 1 students must demonstrate the action of trapezius correctly. 11) At the end of session the phase 1 students must describe the position of latissimus dorsi correctly. 12) At the end of session the phase 1 students must describe the origin of latissimus dorsi correctly. 13) At the end of session the phase 1 students must describe the insertion of latissimus dorsi correctly. 14) At the end of session the phase 1 students must describe the nerve supply of latissimus dorsi correctly. 15) At the end of session the phase 1 students must describe the action of latissimus dorsi correctly. 16) At the end of session the phase 1 students must demonstrate the position of latissimus dorsi correctly. 17) At the end of session the phase 1 students must demonstrate **the** origin of latissimus dorsi correctly. 18) At the end of session the phase 1 students must demonstrate the insertion of latissimus dorsi correctly. 19) At the end of session the phase 1 students must demonstrate the nerve supply of latissimus dorsi correctly. 20) At the end of session the phase 1 students must demonstrate the action of latissimus dorsi correctly.								

AN10.9	**Describe the arterial anastomosis around the scapula and mention the boundaries of triangle of auscultation** **Objectives-** 1) At the end of session the phase 1 students must enumerate the arteries participating in anastomosis around the scapula correctly. 2) At the end of session the phase 1 students must describe the arterial anastomosis around the scapula correctly. 3) At the end of session the phase 1 students must describe the applied anatomy of arterial anastomosis around the scapula correctly. 4) At the end of session the phase 1 students must describe the boundaries of triangle of auscultation correctly. 5) At the end of session the phase 1 students must describe the applied anatomy of triangle of auscultation correctly.	K	KH	N	Lecture	Written			
AN10.10	**Describe and identify the deltoid and rotator cuff muscles** **Objectives-** 1) At the end of session the phase 1 students must describe the origin of deltoid muscle correctly. 2) At the end of session the phase 1 students must describe the insertion of deltoid muscle correctly. 3) At the end of session the phase 1 students must describe the nerve supply of deltoid muscle correctly. 4) At the end of session the phase 1 students must describe the action of deltoid muscle correctly. 5) At the end of session the phase 1 students must demonstrate the origin of deltoid muscle correctly. 6) At the end of session the phase 1 students must demonstrate the insertion of deltoid muscle correctly. 7) At the end of session the phase 1 students must demonstrate the nerve supply of deltoid muscle correctly. 8) At the end of session the phase 1 students must demonstrate the action of deltoid muscle correctly. 9) At the end of session the phase 1 students must enumerate the muscles participating in formation of rotator cuff correctly. 10) At the end of session the phase 1 students must describe the muscles participating in formation of rotator cuff correctly. 11) At the end of session the phase 1 students must discuss theapplied anatomy of rotator cuff correctly. 12) At the end of session the phase 1 students must demonstrate the muscles participating in formation of rotator cuff correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

AN10.11	**Describe & demonstrate attachment of serratus anterior with its action** **Objectives-** 1) At the end of session the phase 1 students must describe the position of serratus anterior correctly. 2) At the end of session the phase 1 students must describe the origin of serratus anterior correctly. 3) At the end of session the phase 1 students must describe the insertion of serratus anterior correctly. 4) At the end of session the phase 1 students must describe the nerve supply of serratus anterior correctly. 5) At the end of session the phase 1 students must describe the action of serratus anterior correctly. 6) At the end of session the phase 1 students must describe the applied anatomy of serratus anterior correctly. 7) At the end of session the phase 1 students must demonstrate the position of serratus anterior correctly. 8) At the end of session the phase 1 students must demonstrate the origin of serratus anterior correctly. 9) At the end of session the phase 1 students must demonstrate the insertion of serratus anterior correctly. 10) At the end of session the phase 1 students must demonstrate the nerve supply of serratus anterior correctly. 11) At the end of session the phase 1 students must demonstrate the action of serratus anterior correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN10.12	Describe and demonstrate shoulder joint for– type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, muscles involved, blood supply, nerve supply and applied anatomy Objectives- 1) At the end of session the phase 1 students must describe the type of shoulder joint correctly. 2) At the end of session the phase 1 students must describe the articular surfaces of shoulder joint correctly. 3) At the end of session the phase 1 students must describe the capsule of shoulder joint correctly. 4) At the end of session the phase 1 students must describe the synovial membrane of shoulder joint correctly. 5) At the end of session the phase 1 students must describe the ligaments of shoulder joint correctly. 6) At the end of session the phase 1 students must describe the relations of shoulder joint correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		Orthopedics	

	7) At the end of session the phase 1 students must describe the movements of shoulder joint correctly. 8) At the end of session the phase 1 students must describe the muscles involved in the movement of shoulder joint correctly. 9) At the end of session the phase 1 students must describe the blood supply of shoulder joint correctly. 10) At the end of session the phase 1 students must describe the nerve supply of shoulder joint correctly. 11) At the end of session the phase 1 students must describe the applied anatomy of shoulder joint correctly. 12) At the end of session the phase 1 students must demonstrate the type of shoulder joint correctly. 13) At the end of session the phase 1 students must demonstrate the articular surfaces of shoulder joint correctly. 14) At the end of session the phase 1 students must demonstrate the capsule of shoulder joint correctly. 15) At the end of session the phase 1 students must demonstrate the synovial membrane of shoulder joint correctly. 16) At the end of session the phase 1 students must demonstrate the ligaments of shoulder joint correctly. 17) At the end of session the phase 1 students must demonstrate the relations of shoulder joint correctly. 18) At the end of session the phase 1 students must demonstrate the movements of shoulder joint correctly. 19) At the end of session the phase 1 students must demonstrate the muscles involved in the movement of shoulder joint correctly. 20) At the end of session the phase 1 students must demonstrate the blood supply of shoulder joint correctly. 21) At the end of session the phase 1 students must demonstrate the nerve supply of shoulder joint correctly.								
AN10.13	**Explain anatomical basis of Injury to axillary nerve during intramuscular injections** **Objectives-** 1) At the end of session the phase 1 students must describe the course of axillary nerve correctly. 2) At the end of session the phase 1 students must describe the applied anatomy of axillary nerve correctly. 3) At the end of session the phase 1 students must describe the anatomical basis of Injury to axillary nerve during intramuscular injections correctly.	K	KH	N	Lecture	Viva voce			
Topic: Arm & Cubital fossa		**Number of competencies: (6)**				**Number of procedures for certification: (NIL)**			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN11.1	**Describe and demonstrate muscle groups of upper arm with emphasis on biceps and triceps brachii** **Objectives-** 1) At the end of session the phase 1 students must describe the origin of muscles of anterior compartment of arm correctly. 2) At the end of session the phase 1 students must describe the insertion of muscles of anterior compartment of arm correctly. 3) At the end of session the phase 1 students must describe the nerve supply of muscles of anterior compartment of arm correctly. 4) At the end of session the phase 1 students must describe the action of muscles of anterior compartment of arm correctly. 5) At the end of session the phase 1 students must describe the applied anatomy of biceps of arm correctly. 6) At the end of session the phase 1 students must demonstrate the origin of muscles of anterior compartment of arm correctly. 7) At the end of session the phase 1 students must demonstrate the insertion of muscles of anterior compartment of arm correctly. 8) At the end of session the phase 1 students must demonstrate the nerve supply of muscles of anterior compartment of arm correctly. 9) At the end of session the phase 1 students must demonstrate the action of muscles of anterior compartment of arm correctly. 10) At the end of session the phase 1 students must describe the origin of muscles of posterior compartment of arm correctly. 11) At the end of session the phase 1 students must describe the insertion of muscles of posterior compartment of arm correctly. 12) At the end of session the phase 1 students must describe the nerve supply of muscles of posterior compartment of arm correctly. 13) At the end of session the phase 1 students must describe the action of muscles of posterior compartment of arm correctly. 14) At the end of session the phase 1 students must describe the applied anatomy of triceps of arm correctly. 15) At the end of session the phase 1 students must demonstrate the origin of muscles of posterior compartment of arm correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	16) At the end of session the phase 1 students must demonstrate the insertion of muscles of posterior compartment of arm correctly. 17) At the end of session the phase 1 students must demonstrate the nerve supply of muscles of posterior compartment of arm correctly. 18) At the end of session the phase 1 students must demonstrate the action of muscles of posterior compartment of arm correctly.								
AN11.2	**Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels in arm** **Objectives-** 1) At the end of session the phase 1 students must describe the formation of median nerve correctly. 2) At the end of session the phase 1 students must describe the course of median nerve correctly. 3) At the end of session the phase 1 students must describe the relations of median nerve correctly. 4) At the end of session the phase 1 students must describe the branches of median nerve correctly. 5) At the end of session the phase 1 students must describe the termination of median nerve correctly. 6) At the end of session the phase 1 students must describe the applied anatomy of median nerve correctly. 7) At the end of session the phase 1 students must demonstrate the formation of median nerve correctly. 8) At the end of session the phase 1 students must demonstrate the course of median nerve correctly. 9) At the end of session the phase 1 students must demonstrate the relations of median nerve correctly. 10) At the end of session the phase 1 students must demonstrate the branches of median nerve correctly. 11) At the end of session the phase 1 students must demonstrate the termination of median nerve correctly. 12) At the end of session the phase 1 students must describe the formation of radial nerve correctly. 13) At the end of session the phase 1 students must describe the course of radial nerve correctly. 14) At the end of session the phase 1 students must describe the relations of radial nerve correctly. 15) At the end of session the phase 1 students must describe the branches of radial nerve correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	16) At the end of session the phase 1 students must describe the termination of radial nerve correctly. 17) At the end of session the phase 1 students must describe the applied anatomy of radial nerve correctly. 18) At the end of session the phase 1 students must demonstrate theformation of radial nerve correctly. 19) At the end of session the phase 1 students must demonstrate the course of radial nerve correctly. 20) At the end of session the phase 1 students must demonstrate the relations of radial nerve correctly. 21) At the end of session the phase 1 students must demonstrate the branches of radial nerve correctly. 22) At the end of session the phase 1 students must demonstrate the termination of radial nerve correctly. 23) At the end of session the phase 1 students must describe the formation of ulnar nerve correctly. 24) At the end of session the phase 1 students must describe the course of ulnar nerve correctly. 25) At the end of session the phase 1 students must describe the relations of ulnar nerve correctly. 26) At the end of session the phase 1 students must describe the branches of ulnar nerve correctly. 27) At the end of session the phase 1 students must describe the termination of ulnar nerve correctly. 28) At the end of session the phase 1 students must describe the applied anatomy of ulnar nerve correctly. 29) At the end of session the phase 1 students must demonstrate the formation of ulnar nerve correctly. 30) At the end of session the phase 1 students must demonstrate the course of ulnar nerve correctly. 31) At the end of session the phase 1 students must demonstrate the relations of ulnar nerve correctly. 32) At the end of session the phase 1 students must demonstrate the branches of ulnar nerve correctly. 33) At the end of session the phase 1 students must demonstrate the termination of ulnar nerve correctly. 34) At the end of session the phase 1 students must describe the formation of musculocutaneous nerve correctly. 35) At the end of session the phase 1 students must describe the course of musculocutaneous nerve correctly. 36) At the end of session the phase 1 students must describe the relations of musculocutaneous nerve correctly. 37) At the end of session the phase 1 students must describe the								

	branches of musculocutaneous nerve correctly. 38) At the end of session the phase 1 students must describe the termination of musculocutaneous nerve correctly. 39) At the end of session the phase 1 students must describe the applied anatomy of musculocutaneous nerve correctly. 40) At the end of session the phase 1 students must demonstrate the formation of musculocutaneous nerve correctly. 41) At the end of session the phase 1 students must demonstrate the course of musculocutaneous nerve correctly. 42) At the end of session the phase 1 students must demonstrate the relations of musculocutaneous nerve correctly. 43) At the end of session the phase 1 students must demonstrate the branches of musculocutaneous nerve correctly. 44) At the end of session the phase 1 students must demonstrate the termination of musculocutaneous nerve correctly. 45) At the end of session the phase 1 students must describe the formation of brachial artery correctly. 46) At the end of session the phase 1 students must describe the course of brachial artery correctly. 47) At the end of session the phase 1 students must describe the relations of brachial artery correctly. 48) At the end of session the phase 1 students must describe the branches of brachial artery correctly. 49) At the end of session the phase 1 students must describe the termination of brachial artery correctly. 50) At the end of session the phase 1 students must describe the applied anatomy of brachial artery correctly. 51) At the end of session the phase 1 students must demonstrate the formation of brachial artery correctly. 52) At the end of session the phase 1 students must demonstrate the course of brachial artery correctly. 53) At the end of session the phase 1 students must demonstrate the relations of brachial artery correctly. 54) At the end of session the phase 1 students must demonstrate the branches of brachial artery correctly. 55) At the end of session the phase 1 students must demonstrate the termination of brachial artery correctly.								
AN11.3	**Describe the anatomical basis of Venepuncture of cubital veins.** **Objectives-** 1) At the end of session the phase 1 students must describe the formation of cubital vein correctly. 2) At the end of session the phase 1 students must describe the course of cubital vein correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	

	3) At the end of session the phase 1 students must describe the distribution of cubital vein correctly. 4) At the end of session the phase 1 students must describe the anatomical basis of Venepuncture of cubital vein correctly.								
AN11.4	**Describe the anatomical basis of Saturday night paralysis.** **Objectives-** 1) At the end of session the phase 1 students must define Saturday night paralysis correctly. 2) At the end of session the phase 1 students must enumerate the disabilities in Saturday night paralysis correctly. 3) At the end of session the phase 1 students must discuss the course of nerve responsible for Saturday night paralysis correctly. 4) At the end of session the phase 1 students must discuss the anatomical basis of Saturday night paralysis correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce		Orthopedics	
AN11.5	**Identify & describe boundaries and contents of cubital fossa** **Objectives-** 1) At the end of session the phase 1 students must describe the boundaries of cubital fossa correctly. 2) At the end of session the phase 1 students must describe the contents of cubital fossa correctly. 3) At the end of session the phase 1 students must describe the applied anatomy of cubital fossa correctly. 4) At the end of session the phase 1 students must demonstrate the boundaries of cubital fossa correctly. 5) At the end of session the phase 1 students must demonstrate the contents of cubital fossa correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN11.6	**Describe the anastomosis around the elbow joint** **Objectives-** 6) At the end of session the phase 1 students must enumerate the arteries participating in anastomosis around the elbow joint correctly. 7) At the end of session the phase 1 students must describe the arterial anastomosis around the elbow joint correctly. 8) At the end of session the phase 1 students must describe the applied anatomy of arterial anastomosis around the elbow joint correctly.	K	KH	N	Lecture	Written			
Topic: Forearm & hand		**Number of competencies: (15)**				**Number of procedures for certification: (NIL)**			
AN12.1	**Describe and demonstrate important muscle groups of ventral forearm with attachments, nerve supply and actions** **Objectives-** 1) At the end of session the phase 1 students must describe the origin of superficial muscles of anterior compartment of	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	forearm correctly. 2) At the end of session the phase 1 students must describe the insertion of superficial muscles of anterior compartment of forearm correctly. 3) At the end of session the phase 1 students must describe the nerve supply of superficial muscles of anterior compartment of forearm correctly. 4) At the end of session the phase 1 students must describe the action of superficial muscles of anterior compartment of forearm correctly. 5) At the end of session the phase 1 students must describe the applied anatomy of superficial muscles of anterior compartment of forearm correctly. 6) At the end of session the phase 1 students must demonstrate the origin of superficial muscles of anterior compartment of forearm correctly. 7) At the end of session the phase 1 students must demonstrate the insertion of superficial muscles of anterior compartment of forearm correctly. 8) At the end of session the phase 1 students must demonstrate the nerve supply of superficial muscles of anterior compartment of forearm correctly. 9) At the end of session the phase 1 students must demonstrate the action of superficial muscles of anterior compartment of forearm correctly. 10) At the end of session the phase 1 students must describe the origin of deep muscles of anterior compartment of forearm correctly. 11) At the end of session the phase 1 students must describe the insertion of deep muscles of anterior compartment of forearm correctly. 12) At the end of session the phase 1 students must describe the nerve supply of deep muscles of anterior compartment of forearm correctly. 13) At the end of session the phase 1 students must describe the action of deep muscles of anterior compartment of forearm correctly. 14) At the end of session the phase 1 students must describe the applied anatomy of deep muscles of anterior compartment of forearm correctly. 15) At the end of session the phase 1 students must demonstrate the origin of deep muscles of anterior compartment of forearm correctly.								

	16) At the end of session the phase 1 students must demonstrate the insertion of deep muscles of anterior compartment of forearm correctly. 17) At the end of session the phase 1 students must demonstrate the nerve supply of deep muscles of anterior compartment of forearm correctly. 18) At the end of session the phase 1 students must demonstrate the action of deep muscles of anterior compartment of forearm correctly.								
AN12.2	**Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels of forearm.** **Objectives-** 1) At the end of session the phase 1 students must describe the course of median nerve in forearm correctly. 2) At the end of session the phase 1 students must describe the relations of median nerve in forearm correctly. 3) At the end of session the phase 1 students must describe the branches of median nerve in forearm correctly. 4) At the end of session the phase 1 students must describe the termination of median nerve in forearm correctly. 5) At the end of session the phase 1 students must describe the applied anatomy of median nerve in forearm correctly. 6) At the end of session the phase 1 students must demonstrate the course of median nerve in forearm correctly. 7) At the end of session the phase 1 students must demonstrate the relations of median nerve in forearm correctly. 8) At the end of session the phase 1 students must demonstrate the branches of median nerve in forearm correctly. 9) At the end of session the phase 1 students must demonstrate the termination of median nerve in forearm correctly. 10) At the end of session the phase 1 students must describe the course of radial nerve in forearm correctly. 11) At the end of session the phase 1 students must describe the relations of radial nerve in forearm correctly. 12) At the end of session the phase 1 students must describe the branches of radial nerve in forearm correctly. 13) At the end of session the phase 1 students must describe the termination of radial nerve in forearm correctly. 14) At the end of session the phase 1 students must describe the applied anatomy of radial nerve in forearm correctly. 15) At the end of session the phase 1 students must demonstrate the course of radial nerve in forearm correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	16) At the end of session the phase 1 students must demonstrate the relations of radial nerve in forearm correctly. 17) At the end of session the phase 1 students must demonstrate the branches of radial nerve in forearm correctly. 18) At the end of session the phase 1 students must demonstrate the termination of radial nerve in forearm correctly. 19) At the end of session the phase 1 students must describe the course of ulnar nerve in forearm correctly. 20) At the end of session the phase 1 students must describe the relations of ulnar nerve in forearm correctly. 21) At the end of session the phase 1 students must describe the branches of ulnar nerve in forearm correctly. 22) At the end of session the phase 1 students must describe the termination of ulnar nerve in forearm correctly. 23) At the end of session the phase 1 students must describe the applied anatomy of ulnar nerve in forearm correctly. 24) At the end of session the phase 1 students must demonstrate the course of ulnar nerve in forearm correctly. 25) At the end of session the phase 1 students must demonstrate the relations of ulnar nerve in forearm correctly. 26) At the end of session the phase 1 students must demonstrate the branches of ulnar nerve in forearm correctly. 27) At the end of session the phase 1 students must demonstrate the termination of ulnar nerve I forearm correctly. 28) At the end of session the phase 1 students must describe the formation of radial artery correctly. 29) At the end of session the phase 1 students must describe the course of radial artery correctly. 30) At the end of session the phase 1 students must describe the relations of radial artery correctly. 31) At the end of session the phase 1 students must describe the branches of radial artery correctly. 32) At the end of session the phase 1 students must describe the termination of radial artery correctly. 33) At the end of session the phase 1 students must describe the applied anatomy of radial artery correctly. 34) At the end of session the phase 1 students must demonstrate the formation of radial artery correctly. 35) At the end of session the phase 1 students must demonstrate the course of radial artery correctly. 36) At the end of session the phase 1 students must demonstrate the relations of radial artery correctly. 37) At the end of session the phase 1 students must demonstrate								

	the branches of radial artery correctly. 38) At the end of session the phase 1 students must demonstrate the termination of radial artery correctly. 39) At the end of session the phase 1 students must describe the formation of ulnar artery correctly. 40) At the end of session the phase 1 students must describe the course of ulnar artery correctly. 41) At the end of session the phase 1 students must describe the relations of ulnar artery correctly. 42) At the end of session the phase 1 students must describe the branches of ulnar artery correctly. 43) At the end of session the phase 1 students must describe the termination of ulnar artery correctly. 44) At the end of session the phase 1 students must describe the applied anatomy of ulnar artery correctly. 45) At the end of session the phase 1 students must demonstrate the formation of ulnar artery correctly. 46) At the end of session the phase 1 students must demonstrate the course of ulnar artery correctly. 47) At the end of session the phase 1 students must demonstrate the relations of ulnar artery correctly. 48) At the end of session the phase 1 students must demonstrate the branches of ulnar artery correctly. 49) At the end of session the phase 1 students must demonstrate the termination of ulnar artery correctly.								
AN12.3	**Identify & describe flexor retinaculum with its attachments** **Objectives-** 1) At the end of session the phase 1 students must define the flexor retinaculum correctly. 2) At the end of session the phase 1 students must describe the attachments of flexor retinaculum correctly. 3) At the end of session the phase 1 students must enumerate the structures passing superficial to flexor retinaculum correctly. 4) At the end of session the phase 1 students must enumerate the structures passing deep to flexor retinaculum correctly. 5) At the end of session the phase 1 students must describe the applied anatomy of flexor retinaculum correctly. 6) At the end of session the phase 1 students must demonstrate the location of flexor retinaculum correctly. 7) At the end of session the phase 1 students must demonstrate the attachments of flexor retinaculum correctly. 8) At the end of session the phase 1 students must demonstrate the structures passing superficial to flexor retinaculum correctly.	**K/S**	**SH**	**Y**	**Practical, Lecture, Small group discussion, DOAP session**	**Written/ Viva voce/ skill assessment**			

	9) At the end of session the phase 1 students must demonstrate the structures passing deep to flexor retinaculum correctly.								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN12.4	**Explain anatomical basis of carpal tunnel syndrome** 1. At the end of session the phase 1 student must be able to describe anatomy of carpal tunnel correctly. 2. At the end of session the phase 1; student must be able to discuss carpal tunnel syndrome correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN12.5	**Identify & describe small muscles of hand. Also describe movements of thumb and muscles involved.** 1. At the end of session the phase 1; student must be able to describe small muscles of hand correctly. 2. At the end of session the phase 1; student must be able to identify small muscles of hand correctly. 3. At the end of session the phase 1; student must be able to describe movement of thumb correctly. 4. At the end of session the phase 1; student must be able to demonstrate muscles involved in thumb movements correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN12.6	**Describe & demonstrate movements of thumb and muscles involved** 1. At the end of session the phase 1; student must be able to describe movement of thumb correctly. 2. At the end of session the phase 1; student must be able to demonstrate muscles involved in thumb movements correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN12.7	**Identify & describe course and branches of important blood vessels and nerves in hand** 1. At the end of session the phase 1; student must be able to describe course ofRadial nerve in hand correctly. 2. At the end of session the phase 1; student must be able to describe course of Ulnar nerve in hand correctly. 3. At the end of session the phase 1; student must be able to describe course of Median nerve in hand correctly. 4. At the end of session the phase 1; student must be able to describe course of Radial artery in hand correctly. 5. At the end of session the phase 1; student must be able to describe course of ulnar artery in hand correctly. 6. At the end of session the phase 1; student must be able to describe Branches of Radial nerve in hand correctly. 7. At the end of session the phase 1; student must be able to describe Branches of Ulnar nerve in hand correctly. 8. At the end of session the phase 1; student must be able to describe Branches of Median nerve in hand correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	9. At the end of session the phase 1; student must be able to describe Branches of Radial artery in hand correctly. 10. At the end of session the phase 1; student must be able to describe Branches of ulnar artery in hand correctly. 11. At the end of session the phase 1; student must be able to demonstrate course ofRadial nerve in hand correctly. 12. At the end of session the phase 1; student must be able to demonstratecourse of Ulnar nerve in hand correctly. 13. At the end of session the phase 1; student must be able to demonstratecourse of Median nerve in hand correctly. 14. At the end of session the phase 1; student must be able to demonstratecourse of Radial artery in hand correctly. 15. At the end of session the phase 1; student must be able to demonstratecourse of ulnar artery in hand correctly. 16. At the end of session the phase 1; student must be able to demonstrateBranches of Radial nerve in hand correctly. 17. At the end of session the phase 1; student must be able to demonstrateBranches of Ulnar nerve in hand correctly. 18. At the end of session the phase 1; student must be able to demonstrateBranches of Median nerve in hand correctly. 19. At the end of session the phase 1; student must be able to demonstrateBranches of Radial artery in hand correctly. 20. At the end of session the phase 1; student must be able to demonstrateBranches of ulnar artery in hand correctly.								
AN12.8	**Describe anatomical basis of Claw hand** 1. At the end of session the phase 1; student must be able to describe anatomy of ulnar nerve correctly. 2. At the end of session the phase 1; student must be able to discuss anatomical basis of claw hand correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN12.9	**Identify & describe fibrous flexor sheaths, ulnar bursa, radial bursa and digital synovial sheaths** 1. At the end of session the phase 1; student must be able to describe fibrous flexor sheaths correctly. 2. At the end of session the phase 1; student must be able to describe ulnar bursa correctly. 3. At the end of session the phase 1; student must be able to describe radial bursa correctly. 4. At the end of session the phase 1; student must be able to describe digital synovial sheaths correctly. 5. At the end of session the phase 1; student must be able to demonstratefibrous flexor sheaths correctly. 6. At the end of session the phase 1; student must be able to demonstrate ulnar bursa correctly. 7. At the end of session the phase 1; student must be able to demonstrateradial bursa correctly. 8. At the end of session the phase 1; student must be able to demonstrate digital synovial sheathscorrectly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

AN12.10	**Explain infection of fascial spaces of palm** 1. At the end of session the phase 1; student should be able to enlist fascial spaces of palm correctly. 2. At the end of session the phase 1; student should be able to describe fascial spaces of palm correctly. 3. At the end of session the phase 1; student should be able to discussinfections of fascial spaces of palm correctly.	K	KH	N	Lecture	Written		General Surgery	
AN12.11	**Identify, describe and demonstrate important muscle groups of dorsal forearm with attachments, nerve supply and actions** 1. At the end of session the phase 1; student must be able to enlist muscles of superficial group of dorsal forearm correctly. 2. At the end of session the phase 1; student must be able to enlist muscles of deep group of dorsal forearm correctly. 3. At the end of session the phase 1; student must be able to identify muscles of superficial group of dorsal forearm correctly. 4. At the end of session the phase 1; student must be able to identify muscles of deep group of dorsal forearm correctly. 5. At the end of session the phase 1; student must be able to demonstrate muscles of superficial group of dorsal forearm correctly. 6. At the end of session the phase 1; student must be able to demonstrate muscles of deep group of dorsal forearm correctly. 7. At the end of session the phase 1; student must be able to describe attachments of muscles of superficial group of dorsal forearm correctly. 8. At the end of session the phase 1; student must be able to describe attachments of muscles of deep group of dorsal forearm correctly. 9. At the end of session the phase 1; student must be able to describe nerve supplies of muscles of superficial group of dorsal forearm correctly. 10. At the end of session the phase 1; student must be able to describe nerve supplies of muscles of deep group of dorsal forearm correctly. 11. At the end of session the phase 1; student must be able to demonstrate actions of muscles of superficial group of dorsal forearm correctly. 12. At the end of session the phase 1; student must be able to demonstrate actions of muscles of deep group of dorsal forearm correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN12.12	**Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels of back of forearm** 1. At the end of session the phase 1; student must be able to describe origin of radial nerve in back of forearm correctly. 2. At the end of session the phase 1; student must be able to describe origin of posterior interosseous nervein back of forearm correctly. 3. At the end of session the phase 1; student must be able to describe origin of posterior interosseous arteryin back of forearm correctly. 4. At the end of session the phase 1; student must be able to describe course of radial nerve in back of forearmcorrectly. 5. At the end of session the phase 1; student must be able to describe course of posterior interosseous nervein back of forearmcorrectly. 6. At the end of session the phase 1; student must be able to describe course of posterior interosseous arteryin back of forearmcorrectly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	

	7. At the end of session the phase 1; student must be able to describe relations of radial nerve in back of forearmcorrectly. 8. At the end of session the phase 1; student must be able to describe relations of posterior interosseous nervein back of forearmcorrectly. 9. At the end of session the phase 1; student must be able to describe relations of posterior interosseous arteryin back of forearm correctly. 10. At the end of session the phase 1; student must be able to describe branches of radial nerve in back of forearmcorrectly. 11. At the end of session the phase 1; student must be able to describe branches of posterior interosseous nervein back of forearmcorrectly. 12. At the end of session the phase 1; student must be able to describe branches of posterior interosseous arteryin back of forearm correctly. 13. At the end of session the phase 1; student must be able to describe tributaries of major veins of back of forearm correctly. 14. At the end of session the phase 1; student must be able to demonstrate origin of radial nerve in back of forearm correctly. 15. At the end of session the phase 1; student must be able to demonstrateorigin of posterior interosseous nervein back of forearm correctly. 16. At the end of session the phase 1; student must be able to demonstrateorigin of posterior interosseous arteryin back of forearm correctly. 17. At the end of session the phase 1; student must be able to demonstrate course of radial nerve in back of forearmcorrectly. 18. At the end of session the phase 1; student must be able to demonstrate course of posterior interosseous nervein back of forearmcorrectly. 19. At the end of session the phase 1; student must be able to demonstrate course of posterior interosseous arteryin back of forearmcorrectly. 20. At the end of session the phase 1; student must be able to demonstrate relations of radial nerve in back of forearmcorrectly. 21. At the end of session the phase 1; student must be able to demonstrate relations of posterior interosseous nervein back of forearmcorrectly. 22. At the end of session the phase 1; student must be able to demonstrate relations of posterior interosseous arteryin back of forearm correctly. 23. At the end of session the phase 1; student must be able to demonstratebranches of radial nerve in back of forearmcorrectly. 24. At the end of session the phase 1; student must be able to demonstratebranches of posterior interosseous nervein back of forearmcorrectly. 25. At the end of session the phase 1; student must be able to demonstratebranches of posterior interosseous arteryin back of forearm correctly. 26. At the end of session the phase 1; student must be able to demonstratetributaries of major veins of back of forearm correctly.								
AN12.13	**Describe the anatomical basis of Wrist drop** 1. At the end of session the phase 1; student must be able to describe radial nerve correctly. 2. At the end of session the phase 1; student must be able to	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	

	discussanatomical basis of wrist drop correctly.								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN12.14	**Identify & describe compartments deep to extensor retinaculum** 1. At the end of session the phase 1; student must be able to describe compartments deep to extensor retinaculum correctly. 2. At the end of session the phase 1; student must be able to identify compartments deep to extensor retinaculum correctly. 3. At the end of session the phase 1; student must be able to demonstrate compartments deep to extensor retinaculum correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN12.15	**Identify & describe extensor expansion formation** 1. At the end of session the phase 1; student must be able to describe extensor expansion formation correctly. 2. At the end of session the phase 1; student must be able to identify extensor expansion formation correctly. 3. At the end of session the phase 1; student must be able to demonstrate extensor expansion formation correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
Topic: General Features, Joints, radiographs &surfacemarking		**Number ofcompetencies:(8)**				**Number of procedures for certification:(NIL)**			
AN13.1	**Describe and explain Fascia of upper limb and compartments, veins of upper limb and its lymphatic drainage** 1. At the end of session the phase 1; student must be able to describe Fascia of upper limb correctly. 2. At the end of session the phase 1; student must be able to describe compartments of upper limb correctly. 3. At the end of session the phase 1; student must be able to describe veins of upper limb correctly. 4. At the end of session the phase 1; student must be able to describe lymphatic drainage of upper limb correctly. 5. At the end of session the phase 1; student must be able to explain Fascia of upper limb correctly. 6. At the end of session the phase 1; student must be able to explain compartments of upper limb correctly. 7. At the end of session the phase 1; student must be able to explainveins of upper limb correctly. 8. At the end of session the phase 1; student must be able to explain lymphatic drainage of upper limb correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN13.2	**Describe dermatomes of upper limb** 1. At the end of session the phase 1; student should be able to describe dermatomes of upper limb correctly. 2. At the end of session the phase 1; student should be able to discuss dermatomes of upper limb correctly.	K	KH	N	Lecture	Written/ Viva voce			

AN13.3	**Identify & describe the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, blood and nerve supply of elbow joint, proximal and distal radio-ulnar joints, wrist joint & first carpometacarpal joint** 1. At the end of session the phase 1; student must be able to describe type of elbow joint correctly. 2. At the end of session the phase 1; student must be able to describe articular surfaces of elbow joint correctly. 3. At the end of session the phase 1; student must be able to describe capsule of elbow joint correctly. 4. At the end of session the phase 1; student must be able to describe synovial membrane of elbow joint correctly. 5. At the end of session the phase 1; student must be able to describe ligaments of elbow joint correctly. 6. At the end of session the phase 1; student must be able to describe relations of elbow joint correctly. 7. At the end of session the phase 1; student must be able to describe movements of elbow joint correctly. 8. At the end of session the phase 1; student must be able to describe blood supply of elbow joint correctly. 9. At the end of session the phase 1; student must be able to describe nerve supply of elbow joint correctly. 10. At the end of session the phase 1; student must be able to identify type of elbow joint correctly. 11. At the end of session the phase 1; student must be able to identify articular surfaces of elbow joint correctly. 12. At the end of session the phase 1; student must be able to identify capsule of elbow joint correctly. 13. At the end of session the phase 1; student must be able to identify synovial membrane of elbow joint correctly. 14. At the end of session the phase 1; student must be able to identify ligaments of elbow joint correctly. 15. At the end of session the phase 1; student must be able to identify relations of elbow joint correctly. 16. At the end of session the phase 1; student must be able to identify movements of elbow joint correctly. 17. At the end of session the phase 1; student must be able to identify blood supply of elbow joint correctly. 18. At the end of session the phase 1; student must be able to identify nerve supply of elbow joint correctly. 19. At the end of session the phase 1; student must be able to demonstrate type of elbow joint correctly. 20. At the end of session the phase 1; student must be able to demonstrate articular surfaces of elbow joint correctly. 21. At the end of session the phase 1; student must be able to demonstrate capsule of elbow joint correctly. 22. At the end of session the phase 1; student must be able to demonstrate	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	synovial membrane of elbow joint correctly. 23. At the end of session the phase 1; student must be able to demonstrate ligaments of elbow joint correctly. 24. At the end of session the phase 1; student must be able to demonstrate relations of elbow joint correctly. 25. At the end of session the phase 1; student must be able to demonstrate movements of elbow joint correctly. 26. At the end of session the phase 1; student must be able to demonstrate blood supply of elbow joint correctly. 27. At the end of session the phase 1; student must be able to demonstrate nerve supply of elbow joint correctly. 28. At the end of session the phase 1; student must be able to describe type of proximal radio-ulnar joints correctly. 29. At the end of session the phase 1; student must be able to describe articular surfaces of proximal radio-ulnar joints correctly. 30. At the end of session the phase 1; student must be able to describe capsule of proximal radio-ulnar joints correctly. 31. At the end of session the phase 1; student must be able to describe synovial membrane of proximal radio-ulnar joints correctly. 32. At the end of session the phase 1; student must be able to describe ligaments of proximal radio-ulnar joints correctly. 33. At the end of session the phase 1; student must be able to describe relations of proximal radio-ulnar joints correctly. 34. At the end of session the phase 1; student must be able to describe movements of proximal radio-ulnar joints correctly. 35. At the end of session the phase 1; student must be able to describe blood supply of proximal radio-ulnar joints correctly. 36. At the end of session the phase 1; student must be able to describe nerve supply of proximal radio-ulnar joints correctly. 37. At the end of session the phase 1; student must be able to identify type of proximal radio-ulnar joints correctly. 38. At the end of session the phase 1; student must be able to identify articular surfaces of proximal radio-ulnar joints correctly. 39. At the end of session the phase 1; student must be able to identify capsule of proximal radio-ulnar joints correctly. 40. At the end of session the phase 1; student must be able to identify synovial membrane of proximal radio-ulnar joints correctly. 41. At the end of session the phase 1; student must be able to identify ligaments of proximal radio-ulnar joints correctly. 42. At the end of session the phase 1; student must be able to identify relations of proximal radio-ulnar joints correctly. 43. At the end of session the phase 1; student must be able to identify movements of proximal radio-ulnar joints correctly. 44. At the end of session the phase 1; student must be able to identify blood supply of proximal radio-ulnar joints correctly. 45. At the end of session the phase 1; student must be able to identify nerve supply of proximal radio-ulnar joints correctly.								

	46. At the end of session the phase 1; student must be able to demonstrate type of proximal radio-ulnar joints correctly. 47. At the end of session the phase 1; student must be able to demonstrate articular surfaces of proximal radio-ulnar joints correctly. 48. At the end of session the phase 1; student must be able to demonstrate capsule of proximal radio-ulnar joints correctly. 49. At the end of session the phase 1; student must be able to demonstrate synovial membrane of proximal radio-ulnar joints correctly. 50. At the end of session the phase 1; student must be able to demonstrate ligaments of proximal radio-ulnar joints correctly. 51. At the end of session the phase 1; student must be able to demonstrate relations of proximal radio-ulnar joints correctly. 52. At the end of session the phase 1; student must be able to demonstrate movements of proximal radio-ulnar joints correctly. 53. At the end of session the phase 1; student must be able to demonstrate blood supply of proximal radio-ulnar joints correctly. 54. At the end of session the phase 1; student must be able to demonstrate nerve supply of proximal radio-ulnar joints correctly. 55. At the end of session the phase 1; student must be able to describe type of distal radio-ulnar joints correctly. 56. At the end of session the phase 1; student must be able to describe articular surfaces of distal radio-ulnar joints correctly. 57. At the end of session the phase 1; student must be able to describe capsule of distal radio-ulnar joints correctly. 58. At the end of session the phase 1; student must be able to describe synovial membrane of distal radio-ulnar joints correctly. 59. At the end of session the phase 1; student must be able to describe ligaments of distal radio-ulnar joints correctly. 60. At the end of session the phase 1; student must be able to describe relations of distal radio-ulnar joints correctly. 61. At the end of session the phase 1; student must be able to describe movements of distal radio-ulnar joints correctly. 62. At the end of session the phase 1; student must be able to describe blood supply of distal radio-ulnar joints correctly. 63. At the end of session the phase 1; student must be able to describe nerve supply of distal radio-ulnar joints correctly. 64. At the end of session the phase 1; student must be able to identify type of distal radio-ulnar joints correctly. 65. At the end of session the phase 1; student must be able to identify articular surfaces of distal radio-ulnar joints correctly. 66. At the end of session the phase 1; student must be able to identify capsule of distal radio-ulnar joints correctly. 67. At the end of session the phase 1; student must be able to identify synovial membrane of distal radio-ulnar joints correctly. 68. At the end of session the phase 1; student must be able to identify ligaments of distal radio-ulnar joints correctly. 69. At the end of session the phase 1; student must be able to								

	identifyrelations of distal radio-ulnar joints correctly. 70. At the end of session the phase 1; student must be able to identify movements of distal radio-ulnar joints correctly. 71. At the end of session the phase 1; student must be able to identify blood supply of distal radio-ulnar joints correctly. 72. At the end of session the phase 1; student must be able to identify nerve supply of distal radio-ulnar joints correctly. 73. At the end of session the phase 1; student must be able to demonstrate type of distal radio-ulnar joints correctly. 74. At the end of session the phase 1; student must be able to demonstrate articular surfaces of distal radio-ulnar joints correctly. 75. At the end of session the phase 1; student must be able to demonstrate capsule of distal radio-ulnar joints correctly. 76. At the end of session the phase 1; student must be able to demonstrate synovial membrane of distal radio-ulnar joints correctly. 77. At the end of session the phase 1; student must be able to demonstrate ligaments of distal radio-ulnar joints correctly. 78. At the end of session the phase 1; student must be able to demonstrate relations of distal radio-ulnar joints correctly. 79. At the end of session the phase 1; student must be able to demonstrate movements of distal radio-ulnar joints correctly. 80. At the end of session the phase 1; student must be able to demonstrate blood supply of distal radio-ulnar joints correctly. 81. At the end of session the phase 1; student must be able to demonstrate nerve supply of distal radio-ulnar joints correctly. 82. At the end of session the phase 1; student must be able to describe type of wrist joint correctly. 83. At the end of session the phase 1; student must be able to describe articular surfaces of wrist joint correctly. 84. At the end of session the phase 1; student must be able to describe capsule of wrist joint correctly. 85. At the end of session the phase 1; student must be able to describe synovial membrane of wrist joint correctly. 86. At the end of session the phase 1; student must be able to describe ligaments of wrist joint correctly. 87. At the end of session the phase 1; student must be able to describe relations of wrist joint correctly. 88. At the end of session the phase 1; student must be able to describe movements of wrist joint correctly. 89. At the end of session the phase 1; student must be able to describe blood supply of wrist joint correctly. 90. At the end of session the phase 1; student must be able to describe nerve supply of wrist joint correctly. 91. At the end of session the phase 1; student must be able to identify type of wrist joint correctly. 92. At the end of session the phase 1; student must be able to identify articular surfaces of wrist joint correctly.								

	93. At the end of session the phase 1; student must be able to identify capsule of wrist joint correctly. 94. At the end of session the phase 1; student must be able to identify synovial membrane of wrist joint correctly. 95. At the end of session the phase 1; student must be able to identify ligaments of wrist joint correctly. 96. At the end of session the phase 1; student must be able to identify relations of wrist joint correctly. 97. At the end of session the phase 1; student must be able to identify movements of wrist joint correctly. 98. At the end of session the phase 1; student must be able to identify blood supply of wrist joint correctly. 99. At the end of session the phase 1; student must be able to identify nerve supply of wrist joint correctly. 100. At the end of session the phase 1; student must be able to demonstrate type of wrist joint correctly. 101. At the end of session the phase 1; student must be able to demonstrate articular surfaces of wrist joint correctly. 102. At the end of session the phase 1; student must be able to demonstrate capsule of wrist joint correctly. 103. At the end of session the phase 1; student must be able to demonstrate synovial membrane of wrist joint correctly. 104. At the end of session the phase 1; student must be able to demonstrate ligaments of wrist joint correctly. 105. At the end of session the phase 1; student must be able to demonstrate relations of wrist joint correctly. 106. At the end of session the phase 1; student must be able to demonstrate movements of wrist joint correctly. 107. At the end of session the phase 1; student must be able to demonstrate blood supply of wrist joint correctly. 108. At the end of session the phase 1; student must be able to demonstrate nerve supply of wrist joint correctly. 109. At the end of session the phase 1; student must be able to describe type of first carpometacarpal joint correctly. 110. At the end of session the phase 1; student must be able to describe articular surfaces of first carpometacarpal joint correctly. 111. At the end of session the phase 1; student must be able to describe capsule of first carpometacarpal joint correctly. 112. At the end of session the phase 1; student must be able to describe synovial membrane of first carpometacarpal joint correctly. 113. At the end of session the phase 1; student must be able to describe ligaments of first carpometacarpal joint correctly. 114. At the end of session the phase 1; student must be able to describe relations of first carpometacarpal joint correctly. 115. At the end of session the phase 1; student must be able to describe movements of first carpometacarpal joint correctly. 116. At the end of session the phase 1; student must be able to describe								

	blood supply of first carpometacarpal joint correctly. 117. At the end of session the phase 1; student must be able to describe nerve supply of first carpometacarpal joint correctly. 118. At the end of session the phase 1; student must be able to identify type of first carpometacarpal joint correctly. 119. At the end of session the phase 1; student must be able to identify articular surfaces of first carpometacarpal joint correctly. 120. At the end of session the phase 1; student must be able to identify capsule of first carpometacarpal joint correctly. 121. At the end of session the phase 1; student must be able to identify synovial membrane of first carpometacarpal joint correctly. 122. At the end of session the phase 1; student must be able to identify ligaments of first carpometacarpal joint correctly. 123. At the end of session the phase 1; student must be able to identify relations of first carpometacarpal joint correctly. 124. At the end of session the phase 1; student must be able to identify movements of first carpometacarpal joint correctly. 125. At the end of session the phase 1; student must be able to identify blood supply of first carpometacarpal joint correctly. 126. At the end of session the phase 1; student must be able to identify nerve supply of first carpometacarpal joint correctly. 127. At the end of session the phase 1; student must be able to demonstrate type of first carpometacarpal joint correctly. 128. At the end of session the phase 1; student must be able to demonstrate articular surfaces of first carpometacarpal joint correctly. 129. At the end of session the phase 1; student must be able to demonstrate capsule of first carpometacarpal joint correctly. 130. At the end of session the phase 1; student must be able to demonstrate synovial membrane of first carpometacarpal joint correctly. 131. At the end of session the phase 1; student must be able to demonstrate ligaments of first carpometacarpal joint correctly. 132. At the end of session the phase 1; student must be able to demonstrate relations of first carpometacarpal joint correctly. 133. At the end of session the phase 1; student must be able to demonstrate movements of first carpometacarpal joint correctly. 134. At the end of session the phase 1; student must be able to demonstrate blood supply of first carpometacarpal joint correctly. 135. At the end of session the phase 1; student must be able to demonstrate nerve supply of first carpometacarpal joint correctly.								
AN13.4	**Describe Sternoclavicular joint, Acromioclavicular joint, Carpometacarpal joints & Metacarpophalangeal joint** 1. At the end of session the phase 1; student should be able to describe Sternoclavicular joint correctly. 2. At the end of session the phase 1; student should be able to discuss Sternoclavicular joint correctly. 3. At the end of session the phase 1; student should be able to describe Acromioclavicular joint correctly.	K	KH	N	Lecture	Written			

	4. At the end of session the phase 1; student should be able to discuss Acromioclavicular joint correctly. 5. At the end of session the phase 1; student should be able to describe Carpometacarpal joints correctly. 6. At the end of session the phase 1; student should be able to discuss Carpometacarpal joints correctly. 7. At the end of session the phase 1; student should be able to describe Metacarpophalangeal joint correctly. 8. At the end of session the phase 1; student should be able to discuss Metacarpophalangeal joint correctly.								
AN13.5	**Identify the bones and joints of upper limb seen in anteroposterior and lateral view radiographs of shoulder region, arm, elbow, forearm and hand** 1. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of shoulder region correctly. 2. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of shoulder region correctly. 3. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of shoulder region correctly. 4. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of shoulder region correctly. 5. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of shoulder region correctly. 6. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of shoulder region correctly. 7. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of shoulder region correctly. 8. At the end of session the phase 1; student must be able to identifyjoints of upper limb in anteroposterior view radiographs of shoulder region correctly. 9. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in anteroposterior view radiographs of shoulder region correctly. 10. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of shoulder region correctly. 11. At the end of session the phase 1; student must be able to identifyjoints of upper limb in lateral view radiographs of shoulder region correctly. 12. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in lateral view radiographs of shoulder region correctly. 13. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of arm correctly.	K/S	SH	Y	Practical, Small group discussion, DOAP session	Viva voce/ skill assessment		Radiodiagnosis	

	14. At the end of session the phase 1; student must be able to identifybones of upper limb in anteroposterior view radiographs of arm correctly. 15. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of arm correctly. 16. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of arm correctly. 17. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of arm correctly. 18. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of arm correctly. 19. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of arm correctly. 20. At the end of session the phase 1; student must be able to identifyjoints of upper limb in anteroposterior view radiographs of arm correctly. 21. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in anteroposterior view radiographs of arm correctly. 22. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of arm correctly. 23. At the end of session the phase 1; student must be able to identifyjoints of upper limb in lateral view radiographs of arm correctly. 24. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in lateral view radiographs of arm correctly. 25. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of elbow correctly. 26. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of elbow correctly. 27. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of elbow correctly. 28. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of elbow correctly. 29. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of elbow correctly. 30. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of elbow correctly. 31. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of forearm correctly. 32. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of forearm correctly. 33. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of forearm correctly. 34. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of forearm correctly.								

	35. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of forearm correctly. 36. At the end of session the phase 1; student must be able to demonstratebones of upper limb in lateral view radiographs of forearm correctly. 37. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of forearm correctly. 38. At the end of session the phase 1; student must be able to identifyjoints of upper limb in anteroposterior view radiographs of forearm correctly. 39. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in anteroposterior view radiographs of forearm correctly. 40. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of forearm correctly. 41. At the end of session the phase 1; student must be able to identifyjoints of upper limb in lateral view radiographs of forearm correctly. 42. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in lateral view radiographs of forearm correctly. 43. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of hand correctly. 44. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of hand correctly. 45. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of hand correctly. 46. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of hand correctly. 47. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of hand correctly. 48. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of hand correctly. 49. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of hand correctly. 50. At the end of session the phase 1; student must be able to identifyjoints of upper limb in anteroposterior view radiographs of hand correctly. 51. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in anteroposterior view radiographs of hand correctly. 52. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of hand correctly. 53. At the end of session the phase 1; student must be able to identifyjoints of upper limb in lateral view radiographs of hand correctly. 54. At the end of session the phase 1; student must be able to demonstratejoints of upper limb in lateral view radiographs of hand correctly.								

AN13.6	**Identify & demonstrate important bony landmarks of upper limb: Jugular notch, sternal angle, acromial angle, spine of the scapula, vertebral level of the medial end, Inferior angle of the scapula** 1. At the end of session the phase 1; student must be able to identify Jugular notch correctly. 2. At the end of session the phase 1; student must be able to demonstrate Jugular notch correctly. 3. At the end of session the phase 1; student must be able to identify sternal angle correctly. 4. At the end of session the phase 1; student must be able to demonstrate sternal angle correctly. 5. At the end of session the phase 1; student must be able to identify acromial angle correctly. 6. At the end of session the phase 1; student must be able to demonstrate acromial angle correctly. 7. At the end of session the phase 1; student must be able to identify spine of the scapula correctly. 8. At the end of session the phase 1; student must be able to demonstrate spine of the scapula correctly. 9. At the end of session the phase 1; student must be able to identify vertebral level of the medial end of the scapula correctly. 10. At the end of session the phase 1; student must be able to demonstrate vertebral level of the medial end of the scapula correctly. 11. At the end of session the phase 1; student must be able to identify Inferior angle of the scapula correctly. 12. At the end of session the phase 1; student must be able to demonstrate Inferior angle of the scapula correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment			
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN13.7	**Identify & demonstrate surface projection of:** **Cephalic and basilic vein, Palpation of Brachial artery, Radial artery, Testing of muscles: Trapezius, pectoralis major, serratus anterior, latissimus dorsi, deltoid, biceps brachii, Brachioradialis** 1. At the end of session the phase 1; student must be able to describe surface projection of Cephalic vein correctly. 2. At the end of session the phase 1; student must be able to demonstrate surface projection of Cephalic vein correctly. 3. At the end of session the phase 1; student must be able to describe surface projection of Basilic vein correctly. 4. At the end of session the phase 1; student must be able to demonstrate surface projection of Basilic vein correctly. 5. At the end of session the phase 1; student must be able to describe	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment			

	Palpation of Brachial artery correctly. 6. At the end of session the phase 1; student must be able to demonstrate Palpation of Brachial artery correctly. 7. At the end of session the phase 1; student must be able to describe Palpation of Radial artery correctly. 8. At the end of session the phase 1; student must be able to demonstrate Palpation of Radial artery correctly. 9. At the end of session the phase 1; student must be able to describe Testing of Trapezius correctly. 10. At the end of session the phase 1; student must be able to demonstrate Testing of Trapezius correctly. 11. At the end of session the phase 1; student must be able to describe Testing of pectoralis major correctly. 12. At the end of session the phase 1; student must be able to demonstrate Testing of pectoralis major correctly. 13. At the end of session the phase 1; student must be able to describe Testing of serratus anterior correctly. 14. At the end of session the phase 1; student must be able to demonstrate Testing of serratus anterior correctly. 15. At the end of session the phase 1; student must be able to describe Testing of latissimus dorsi correctly. 16. At the end of session the phase 1; student must be able to demonstrate Testing of latissimus dorsi correctly. 17. At the end of session the phase 1; student must be able to describe Testing of deltoid correctly. 18. At the end of session the phase 1; student must be able to demonstrate Testing of deltoid correctly. 19. At the end of session the phase 1; student must be able to describe Testing of biceps brachii correctly. 20. At the end of session the phase 1; student must be able to demonstrate Testing of biceps brachii correctly. 21. At the end of session the phase 1; student must be able to describe Testing of Brachioradialis correctly. 22. At the end of session the phase 1; student must be able to demonstrate Testing of Brachioradialis correctly.								
AN13.8	**Describe development of upper limb** 1. At the end of session the phase 1; student should be able to describe development of upper limb correctly. 2. At the end of session the phase 1; student should be able to discuss development of upper limb correctly.	K	KH	N	Lecture	Written			
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AN14.1	**Identify the given bone, its side, important features & keep it in anatomical position** 1. At the end of session the phase 1; student must be able to describe the given bone correctly. 2. At the end of session the phase 1; student must be able to Identify the given bone correctly. 3. At the end of session the phase 1; student must be able to describe the side determination of given bone correctly. 4. At the end of session the phase 1; student must be able to Identify the side determination of given bone correctly. 5. At the end of session the phase 1; student must be able to demonstrate the side determination of given bone correctly. 6. At the end of session the phase 1; student must be able to describe the important features of given bone correctly. 7. At the end of session the phase 1; student must be able to Identify the important features of given bone correctly. 8. At the end of session the phase 1; student must be able to demonstrate the important features of given bone correctly. 9. At the end of session the phase 1; student must be able to describe the anatomical position of given bone correctly. 10. At the end of session the phase 1; student must be able to demonstrate the anatomical position of given bone correctly.	K/S	SH	Y	DOAP session	Viva voce			
AN14.2	**Identify & describe joints formed by the given bone** 1. At the end of session the phase 1; student must be able to describe joints formed by the given bone correctly. 2. At the end of session the phase 1; student must be able to identify joints formed by the given bone correctly. 3. At the end of session the phase 1; student must be able to demonstrate joints formed by the given bone correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce			
AN14.3	**Describe the importance of ossification of lower end of femur & upper end of tibia** 1. At the end of session the phase 1; student must be able to describe importance of ossification of lower end of femur correctly. 2. At the end of session the phase 1; student must be able to describe importance of ossification of upper end of tibia correctly. 3. At the end of session the phase 1; student must be able to discuss importance of ossification of lower end of femur correctly. 4. At the end of session the phase 1; student must be able to discuss importance of ossification of upper end of tibia correctly.	K	KH	Y	Lecture	Viva voce/ Practicals		Forensic Medicine & Toxicology	
AN14.4	**Identify and name various bones in the articulated foot with individual muscle attachment** 1. At the end of session the phase 1; student should be able to enlist various bones in the articulated foot correctly. 2. At the end of session the phase 1; student should be able to identify various bones in the articulated foot correctly.	K/S	SH	N	Practical, DOAP session, Small group teaching	Viva voce/ Practicals			

	3. At the end of session the phase 1; student should be able to demonstrate various bones in the articulated foot correctly. 4. At the end of session the phase 1; student should be able to enlist muscle attachments of various bones in the articulated foot correctly. 5. At the end of session the phase 1; student should be able to identify muscle attachments of various bones in the articulated foot correctly. 6. At the end of session the phase 1; student should be able to demonstrate muscle attachments of various bones in the articulated foot correctly.								
Topic: Front & Medial sideofthigh		**Number ofcompetencies:(5)**				**Number of procedures for certification:(NIL)**			
AN15.1	**Describe and demonstrate origin, course, relations, branches (or tributaries), termination of important nerves and vessels of anterior thigh** 1. At the end of session the phase 1; student must be able to describe origin of femoral nerve in anterior thigh correctly. 2. At the end of session the phase 1; student must be able to describe course of femoral nerve in anterior thigh correctly. 3. At the end of session the phase 1; student must be able to describe relations of femoral nerve in anterior thigh correctly. 4. At the end of session the phase 1; student must be able to describe branches of femoral nerve in anterior thigh correctly. 5. At the end of session the phase 1; student must be able to demonstrate origin of femoral nerve in anterior thigh correctly. 6. At the end of session the phase 1; student must be able to demonstratecourse of femoral nerve in anterior thigh correctly. 7. At the end of session the phase 1; student must be able to demonstraterelations of femoral nerve in anterior thigh correctly. 8. At the end of session the phase 1; student must be able to demonstratebranches of femoral nerve in anterior thigh correctly. 9. At the end of session the phase 1; student must be able to describe origin of femoral artery in anterior thigh correctly. 10. At the end of session the phase 1; student must be able to describe course of femoral artery in anterior thigh correctly. 11. At the end of session the phase 1; student must be able to describe relations of femoral artery in anterior thigh correctly. 12. At the end of session the phase 1; student must be able to describe branches of femoral artery in anterior thigh correctly. 13. At the end of session the phase 1; student must be able to demonstrate origin of femoral artery in anterior thigh correctly. 14. At the end of session the phase 1; student must be able to demonstratecourse of femoral artery in anterior thigh correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	15. At the end of session the phase 1; student must be able to demonstraterelations of femoral artery in anterior thigh correctly. 16. At the end of session the phase 1; student must be able to demonstratebranches of femoral artery in anterior thigh correctly. 17. At the end of session the phase 1; student must be able to describe origin of femoral vein in anterior thigh correctly. 18. At the end of session the phase 1; student must be able to describe course of femoral vein in anterior thigh correctly. 19. At the end of session the phase 1; student must be able to describe relations of femoral vein in anterior thigh correctly. 20. At the end of session the phase 1; student must be able to describe tributaries of femoral vein in anterior thigh correctly. 21. At the end of session the phase 1; student must be able to demonstrate origin of femoral vein in anterior thigh correctly. 22. At the end of session the phase 1; student must be able to demonstrate course of femoral vein in anterior thigh correctly. 23. At the end of session the phase 1; student must be able to demonstrate relations of femoral vein in anterior thigh correctly. 24. At the end of session the phase 1; student must be able to demonstratetributaries of femoral vein in anterior thigh correctly. 25. At the end of session the phase 1; student must be able to describe origin of great saphneous vein in anterior thigh correctly. 26. At the end of session the phase 1; student must be able to describe course of great saphneous vein in anterior thigh correctly. 27. At the end of session the phase 1; student must be able to describe relations of great saphneous vein in anterior thigh correctly. 28. At the end of session the phase 1; student must be able to describe tributaries of great saphneous vein in anterior thigh correctly. 29. At the end of session the phase 1; student must be able to demonstrate origin of great saphneous vein in anterior thigh correctly. 30. At the end of session the phase 1; student must be able to demonstrate course of great saphneous vein in anterior thigh correctly. 31. At the end of session the phase 1; student must be able to demonstrate relations of great saphneous vein in anterior thigh correctly. 32. At the end of session the phase 1; student must be able to demonstratetributaries of great saphneous vein in anterior thigh correctly.								
AN15.2	**Describe and demonstrate major muscles with their attachment, nerve supply and actions** 1. At the end of session the phase 1; student must be able to describe attachments of major muscles of anterior thigh correctly. 2. At the end of session the phase 1; student must be able to demonstrateattachments of major muscles of anterior thigh correctly. 3. At the end of session the phase 1; student must be able to describe	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	nerve supplies of major muscles of anterior thigh correctly. 4. At the end of session the phase 1; student must be able to demonstratenerve supplies of major muscles of anterior thigh correctly. 5. At the end of session the phase 1; student must be able to describe actions of major muscles of anterior thigh correctly. 6. At the end of session the phase 1; student must be able to demonstrate actions of major muscles of anterior thigh correctly.								
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN15.3	**Describe and demonstrate boundaries, floor, roof and contents of femoral triangle** 1. At the end of session the phase 1; student must be able to describe boundaries of femoral triangle correctly. 2. At the end of session the phase 1; student must be able to describe floor of femoral triangle correctly. 3. At the end of session the phase 1; student must be able to describe roof of femoral triangle correctly. 4. At the end of session the phase 1; student must be able to describe contents of femoral triangle correctly. 5. At the end of session the phase 1; student must be able to demonstrate boundaries of femoral triangle correctly. 6. At the end of session the phase 1; student must be able to demonstratefloor of femoral triangle correctly. 7. At the end of session the phase 1; student must be able to demonstrateroof of femoral triangle correctly. 8. At the end of session the phase 1; student must be able to demonstratecontents of femoral triangle correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN15.4	**Explain anatomical basis of Psoas abscess & Femoral hernia** 1. At the end of session the phase 1; student should be able to describe psoas muscles correctly. 2. At the end of session the phase 1; student should be able to explain anatomical basis of psoas abscess correctly. 3. At the end of session the phase 1; student should be able to describe femoral hernia correctly. 4. At the end of session the phase 1; student should be able to Explain anatomical basis of femoral hernia correctly.	K	KH	N	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN15.5	**Describe and demonstrate adductor canal with its content** 1. At the end of session the phase 1; student must be able to describe boundaries of adductor canal correctly. 2. At the end of session the phase 1; student must be able to describe floor of adductor canal correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	3. At the end of session the phase 1; student must be able to describe roof of adductor canal correctly. 4. At the end of session the phase 1; student must be able to describe contents of adductor canal correctly. 5. At the end of session the phase 1; student must be able to demonstrate boundaries of adductor canal correctly. 6. At the end of session the phase 1; student must be able to demonstratefloor of adductor canal correctly. 7. At the end of session the phase 1; student must be able to demonstrateroof of adductor canal correctly. 8. At the end of session the phase 1; student must be able to demonstratecontents of adductor canal correctly.								
Topic: Gluteal region & backofthigh		**Number ofcompetencies:(6)**				**Number of procedures for certification:(NIL)**			
AN16.1	**Describe and demonstrate origin, course, relations, branches (or tributaries), termination of important nerves and vessels of gluteal region** 1. At the end of session the phase 1; student must be able to describe origin of superior gluteal nerve in gluteal region correctly. 2. At the end of session the phase 1; student must be able to describe course of superior gluteal nerve in gluteal region correctly. 3. At the end of session the phase 1; student must be able to describe relations of superior gluteal nerve in gluteal region correctly. 4. At the end of session the phase 1; student must be able to describe branches of superior gluteal nerve in gluteal region correctly. 5. At the end of session the phase 1; student must be able to demonstrate origin of superior gluteal nerve in gluteal region correctly. 6. At the end of session the phase 1; student must be able to demonstratecourse of superior gluteal nerve in gluteal region correctly. 7. At the end of session the phase 1; student must be able to demonstraterelations of superior gluteal nerve in gluteal region correctly. 8. At the end of session the phase 1; student must be able to demonstratebranches of superior gluteal nerve in gluteal region correctly. 9. At the end of session the phase 1; student must be able to describe origin of inferior gluteal nerve in gluteal region correctly. 10. At the end of session the phase 1; student must be able to describe course of inferior gluteal nerve in gluteal region correctly. 11. At the end of session the phase 1; student must be able to describe relations of inferior gluteal nerve in gluteal region correctly. 12. At the end of session the phase 1; student must be able to describe branches of inferior gluteal nerve in gluteal region correctly. 13. At the end of session the phase 1; student must be able to	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	demonstrate origin of inferior gluteal nerve in gluteal region correctly. 14. At the end of session the phase 1; student must be able to demonstratecourse of inferior gluteal nerve in gluteal region correctly. 15. At the end of session the phase 1; student must be able to demonstraterelations of inferior gluteal nerve in gluteal region correctly. 16. At the end of session the phase 1; student must be able to demonstratebranches of inferior gluteal nerve in gluteal region correctly. 17. At the end of session the phase 1; student must be able to describe origin of sciatic nerve in gluteal region correctly. 18. At the end of session the phase 1; student must be able to describe course of sciatic nerve in gluteal region correctly. 19. At the end of session the phase 1; student must be able to describe relations of sciatic nerve in gluteal region correctly. 20. At the end of session the phase 1; student must be able to describe branches of sciatic nerve in gluteal region correctly. 21. At the end of session the phase 1; student must be able to demonstrate origin of sciatic nerve in gluteal region correctly. 22. At the end of session the phase 1; student must be able to demonstratecourse of sciatic nerve in gluteal region correctly. 23. At the end of session the phase 1; student must be able to demonstraterelations of sciatic nerve in gluteal region correctly. 24. At the end of session the phase 1; student must be able to demonstratebranches of sciatic nerve in gluteal region correctly. 25. At the end of session the phase 1; student must be able to describe origin of superior gluteal artery ingluteal region correctly. 26. At the end of session the phase 1; student must be able to describe course of superior gluteal artery ingluteal region correctly. 27. At the end of session the phase 1; student must be able to describe relations of superior gluteal artery ingluteal region correctly. 28. At the end of session the phase 1; student must be able to describe branches of superior gluteal artery ingluteal region correctly. 29. At the end of session the phase 1; student must be able to demonstrate origin of superior gluteal artery ingluteal region correctly. 30. At the end of session the phase 1; student must be able to demonstratecourse of superior gluteal artery ingluteal region correctly. 31. At the end of session the phase 1; student must be able to demonstraterelations of superior gluteal artery ingluteal region correctly. 32. At the end of session the phase 1; student must be able to demonstratebranches of superior gluteal artery ingluteal region correctly. 33. At the end of session the phase 1; student must be able to describe origin of inferior gluteal artery ingluteal region correctly. 34. At the end of session the phase 1; student must be able to describe course of inferior gluteal artery ingluteal region correctly.								

	35. At the end of session the phase 1; student must be able to describe relations of inferior gluteal artery ingluteal region correctly. 36. At the end of session the phase 1; student must be able to describe branches of inferior gluteal artery ingluteal region correctly. 37. At the end of session the phase 1; student must be able to demonstrate origin of inferior gluteal artery ingluteal region correctly. 38. At the end of session the phase 1; student must be able to demonstratecourse of inferior gluteal artery ingluteal region correctly. 39. At the end of session the phase 1; student must be able to demonstraterelations of inferior gluteal artery ingluteal region correctly. 40. At the end of session the phase 1; student must be able to demonstratebranches of inferior gluteal artery ingluteal region correctly.								
AN16.2	**Describe anatomical basis of sciatic nerve injury during gluteal intramuscular injections** 1. At the end of session the phase 1; student must be able to describe sciatic nerve in gluteal region correctly. 2. At the end of session the phase 1; student must be able to discuss anatomical basis of sciatic nerve injury during gluteal intramuscular injections correctly.	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN16.3	**Explain the anatomical basis of Trendelenburg sign** 1. At the end of session the phase 1; student must be able to describe actions of gluteal muscles correctly. 2. At the end of session the phase 1; student must be able to describe Trendelenburg sign correctly. 3. At the end of session the phase 1; student must be able to discuss anatomical basis of Trendelenburg sign correctly.	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN16.4	**Describe and demonstrate the hamstrings group of muscles with their attachment, nerve supply and actions** 1. At the end of session the phase 1; student must be able to describe attachments of hamstrings group of muscles correctly. 2. At the end of session the phase 1; student must be able to describe nerve supply of hamstrings group of muscles correctly. 3. At the end of session the phase 1; student must be able to describe actions of hamstrings group of muscles correctly. 4. At the end of session the phase 1; student must be able to demonstrate attachments of hamstrings group of muscles correctly. 5. At the end of session the phase 1; student must be able to demonstrate nerve supply of hamstrings group of muscles correctly. 6. At the end of session the phase 1; student must be able to demonstrate actions of hamstrings group of muscles correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN16.5	**Describe and demonstrate the origin, course, relations, branches (or tributaries), termination of important nerves and vessels on the back of thigh** 1. At the end of session the phase 1; student must be able to describe origin of Sciatic nerve in back of thigh correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	2. At the end of session the phase 1; student must be able to describe course of Sciatic nerve in back of thigh correctly. 3. At the end of session the phase 1; student must be able to describe relations of Sciatic nerve in back of thigh correctly. 4. At the end of session the phase 1; student must be able to describe branches of Sciatic nerve in back of thigh correctly. 5. At the end of session the phase 1; student must be able to demonstrateorigin of Sciatic nerve in back of thigh correctly. 6. At the end of session the phase 1; student must be able to demonstratecourse of Sciatic nerve in back of thigh correctly. 7. At the end of session the phase 1; student must be able to demonstraterelations of Sciatic nerve in back of thigh correctly. 8. At the end of session the phase 1; student must be able to demonstratebranches of Sciatic nerve in back of thigh correctly. 9. At the end of session the phase 1; student must be able to describe origin of profunda femoris artery in back of thigh correctly. 10. At the end of session the phase 1; student must be able to describe course of profunda femoris artery in back of thigh correctly. 11. At the end of session the phase 1; student must be able to describe relations of profunda femoris artery in back of thigh correctly. 12. At the end of session the phase 1; student must be able to describe branches of profunda femoris artery in back of thigh correctly. 13. At the end of session the phase 1; student must be able to demonstrate origin of profunda femoris artery in back of thigh correctly. 14. At the end of session the phase 1; student must be able to demonstratecourse of profunda femoris artery in back of thigh correctly. 15. At the end of session the phase 1; student must be able to demonstraterelations of profunda femoris artery in back of thigh correctly. 16. At the end of session the phase 1; student must be able to demonstratebranches of profunda femoris artery in back of thigh correctly.								
AN16.6	**Describe and demonstrate the boundaries, roof, floor, contents and relations of popliteal fossa** 1. At the end of session the phase 1; student must be able to describe boundaries of popliteal fossa correctly. 2. At the end of session the phase 1; student must be able to describe floor of popliteal fossa correctly. 3. At the end of session the phase 1; student must be able to describe roof of popliteal fossa correctly. 4. At the end of session the phase 1; student must be able to describe contents of popliteal fossa correctly. 5. At the end of session the phase 1; student must be able to describe relations of popliteal fossa correctly. 6. At the end of session the phase 1; student must be able to demonstrate	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	boundaries of popliteal fossa correctly. 7. At the end of session the phase 1; student must be able to demonstratefloor of popliteal fossa correctly. 8. At the end of session the phase 1; student must be able to demonstrateroof of popliteal fossa correctly. 9. At the end of session the phase 1; student must be able to demonstratecontents of popliteal fossa correctly. 10. At the end of session the phase 1; student must be able to demonstraterelations of popliteal fossa correctly.								
Topic:HipJoint			**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**		
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN17.1	**Describe and demonstrate the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply, bursae around the hip joint** 1. At the end of session the phase 1; student must be able to describe type of hip joint correctly. 2. At the end of session the phase 1; student must be able to describe articular surfaces of hip joint correctly. 3. At the end of session the phase 1; student must be able to describe capsule of hip joint correctly. 4. At the end of session the phase 1; student must be able to describe synovial membrane of hip joint correctly. 5. At the end of session the phase 1; student must be able to describe ligaments of hip joint correctly. 6. At the end of session the phase 1; student must be able to describe relations of hip joint correctly. 7. At the end of session the phase 1; student must be able to describe movements of hip joint correctly. 8. At the end of session the phase 1; student must be able to describe muscles involved in movements of hip joint correctly. 9. At the end of session the phase 1; student must be able to describe blood supply of hip joint correctly. 10. At the end of session the phase 1; student must be able to describe nerve supply of hip joint correctly. 11. At the end of session the phase 1; student must be able to describe bursae around the hip joint correctly. 12. At the end of session the phase 1; student must be able to demonstrate type of hip joint correctly. 13. At the end of session the phase 1; student must be able to demonstrate articular surfaces of hip joint correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	14. At the end of session the phase 1; student must be able to demonstrate capsule of hip joint correctly. 15. At the end of session the phase 1; student must be able to demonstrate synovial membrane of hip joint correctly. 16. At the end of session the phase 1; student must be able to demonstrate ligaments of hip joint correctly. 17. At the end of session the phase 1; student must be able to demonstrate relations of hip joint correctly. 18. At the end of session the phase 1; student must be able to demonstrate movements of hip joint correctly. 19. At the end of session the phase 1; student must be able to demonstrate muscles involved in movements of hip joint correctly. 20. At the end of session the phase 1; student must be able to demonstrate blood supply of hip joint correctly. 21. At the end of session the phase 1; student must be able to demonstrate nerve supply of hip joint correctly. 22. At the end of session the phase 1; student must be able to demonstrate bursae around the hip joint correctly.								
AN17.2	**Describe anatomical basis of complications of fracture neck of femur** 1. At the end of session the phase 1; student should be able to describe complications of fracture neck of femur correctly. 2. At the end of session the phase 1; student should be able to discuss anatomical basis of complications of fracture neck of femur correctly.	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN17.3	**Describe dislocation of hip joint and surgical hip replacement** 1. At the end of session the phase 1; student should be able to describe dislocation of hip joint correctly. 2. At the end of session the phase 1; student should be able to describe surgical hip replacement correctly. 3. At the end of session the phase 1; student should be able to discuss dislocation of hip joint correctly. 4. At the end of session the phase 1; student should be able to discuss surgical hip replacement correctly.	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
Topic: Knee joint, Anterior compartment of leg & dorsumoffoot **Number ofcompetencies:(7)** **Number of procedures for certification:(NIL)**									
AN18.1	**Describe and demonstrate major muscles of anterior compartment of leg with their attachment, nerve supply and actions** 1. At the end of session the phase 1; student must be able to describe attachments of muscles of anterior compartment of leg correctly. 2. At the end of session the phase 1; student must be able to describe nerve supply of muscles of anterior compartment of leg correctly. 3. At the end of session the phase 1; student must be able to describe actions of muscles of anterior compartment of leg correctly. 4. At the end of session the phase 1; student must be able to demonstrate attachments of muscles of anterior compartment of leg correctly. 5. At the end of session the phase 1; student must be able to demonstrate	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	nerve supply of muscles of anterior compartment of leg correctly. 6. At the end of session the phase 1; student must be able to demonstrate actions of muscles of anterior compartment of leg correctly.								
AN18.2	**Describe and demonstrate origin, course, relations, branches (or tributaries), termination of important nerves and vessels of anterior compartment of leg** 1. At the end of session the phase 1; student must be able to describe origin of Deep peroneal nerve in anterior compartment of leg correctly. 2. At the end of session the phase 1; student must be able to describe course of Deep peroneal nerve in anterior compartment of leg correctly. 3. At the end of session the phase 1; student must be able to describe relations of Deep peroneal nerve in anterior compartment of leg correctly. 4. At the end of session the phase 1; student must be able to describe branches of Deep peroneal nerve in anterior compartment of leg correctly. 5. At the end of session the phase 1; student must be able to demonstrate origin of Deep peroneal nerve in anterior compartment of leg correctly. 6. At the end of session the phase 1; student must be able to demonstratecourse of Deep peroneal nerve in anterior compartment of leg correctly. 7. At the end of session the phase 1; student must be able to demonstraterelations of Deep peroneal nerve in anterior compartment of leg correctly. 8. At the end of session the phase 1; student must be able to demonstratebranches of Deep peroneal nerve in anterior compartment of leg correctly. 9. At the end of session the phase 1; student must be able to describe origin of anterior tibial artery in anterior compartment of leg correctly. 10. At the end of session the phase 1; student must be able to describe course of anterior tibial artery in anterior compartment of leg correctly. 11. At the end of session the phase 1; student must be able to describe relations of anterior tibial artery in anterior compartment of leg correctly. 12. At the end of session the phase 1; student must be able to describe branches of anterior tibial artery in anterior compartment of leg correctly. 13. At the end of session the phase 1; student must be able to demonstrate origin of anterior tibial artery in anterior compartment of leg correctly. 14. At the end of session the phase 1; student must be able to demonstratecourse of anterior tibial artery in anterior compartment of leg correctly. 15. At the end of session the phase 1; student must be able to demonstraterelations of anterior tibial artery in anterior compartment of	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	leg correctly. 16. At the end of session the phase 1; student must be able to demonstratebranches of anterior tibial artery in anterior compartment of leg correctly.								
AN18.3	**Explain the anatomical basis of foot drop** 1. At the end of session the phase 1; student must be able to describe common peroneal nerve correctly. 2. At the end of session the phase 1; student must be able to discuss anatomical basis of foot drop correctly.	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		General Surgery	
AN18.4	**Describe and demonstrate the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply, bursae around the knee joint** 1. At the end of session the phase 1; student must be able to describe type of knee joint correctly. 2. At the end of session the phase 1; student must be able to describe articular surfaces of knee joint correctly. 3. At the end of session the phase 1; student must be able to describe capsule of knee joint correctly. 4. At the end of session the phase 1; student must be able to describe synovial membrane of knee joint correctly. 5. At the end of session the phase 1; student must be able to describe ligaments of knee joint correctly. 6. At the end of session the phase 1; student must be able to describe relations of knee joint correctly. 7. At the end of session the phase 1; student must be able to describe movements of knee joint correctly. 8. At the end of session the phase 1; student must be able to describe muscles involved in movements of knee joint correctly. 9. At the end of session the phase 1; student must be able to describe blood supply of knee joint correctly. 10. At the end of session the phase 1; student must be able to describe nerve supply of knee joint correctly. 11. At the end of session the phase 1; student must be able to describe bursae around the knee joint correctly. 12. At the end of session the phase 1; student must be able to demonstrate type of knee joint correctly. 13. At the end of session the phase 1; student must be able to demonstrate articular surfaces of knee joint correctly. 14. At the end of session the phase 1; student must be able to demonstrate capsule of knee joint correctly. 15. At the end of session the phase 1; student must be able to demonstrate synovial membrane of knee joint correctly. 16. At the end of session the phase 1; student must be able to demonstrate ligaments of knee joint correctly. 17. At the end of session the phase 1; student must be able to demonstrate	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	relations of knee joint correctly. 18. At the end of session the phase 1; student must be able to demonstrate movements of knee joint correctly. 19. At the end of session the phase 1; student must be able to demonstrate muscles involved in movements of knee joint correctly. 20. At the end of session the phase 1; student must be able to demonstrate blood supply of knee joint correctly. 21. At the end of session the phase 1; student must be able to demonstrate nerve supply of knee joint correctly. 22. At the end of session the phase 1; student must be able to demonstrate bursae around the knee joint correctly.								
AN18.5	**Explain the anatomical basis of locking and unlocking of the knee joint** 1. At the end of session the phase 1; student must be able to describe locking of the knee joint correctly. 2. At the end of session the phase 1; student must be able to describe unlocking of the knee joint correctly. 3. At the end of session the phase 1; student must be able to Explain the anatomical basis of locking of the knee joint correctly. 4. At the end of session the phase 1; student must be able to Explain the anatomical basis of unlocking of the knee joint correctly.	K	KH	Y	Small group teaching	Written/ Viva voce			
AN18.6	**Describe knee joint injuries with its applied anatomy** 1. At the end of session the phase 1; student should be able to describe knee joint injuries correctly. 2. At the end of session the phase 1; student should be able to describe applied anatomy of knee joint injuries correctly. 3. At the end of session the phase 1; student should be able to discussknee joint injuries correctly. 4. At the end of session the phase 1; student should be able to discussapplied anatomy of knee joint injuries correctly.	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN18.7	**Explain anatomical basis of Osteoarthritis** 1. At the end of session the phase 1; student should be able to describe osteoarthritis correctly. 2. At the end of session the phase 1; student should be able to Explain anatomical basis of Osteoarthritiscorrectly.	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
Topic: Back of Leg&Sole		**Number ofcompetencies:(7)**				**Number of procedures for certification:(NIL)**			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration

AN19.1	**Describe and demonstrate the major muscles of back of leg with their attachment, nerve supply and actions** 1. At the end of session the phase 1; student must be able to describe attachments of muscles of back of leg correctly. 2. At the end of session the phase 1; student must be able to describe nerve supply of muscles of back of leg correctly. 3. At the end of session the phase 1; student must be able to describe actions of muscles of back of leg correctly. 4. At the end of session the phase 1; student must be able to demonstrate attachments of muscles of back of leg correctly. 5. At the end of session the phase 1; student must be able to demonstrate nerve supply of muscles of back of leg correctly. 6. At the end of session the phase 1; student must be able to demonstrate actions of muscles of back of leg correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN19.2	**Describe and demonstrate the origin, course, relations, branches (or tributaries), termination of important nerves and vessels of back of leg** 1. At the end of session the phase 1; student must be able to describe origin of Tibial nerve in back of leg correctly. 2. At the end of session the phase 1; student must be able to describe course of Tibial nerve in back of leg correctly. 3. At the end of session the phase 1; student must be able to describe relations of Tibial nerve in back of leg correctly. 4. At the end of session the phase 1; student must be able to describe branches of Tibial nerve in back of leg correctly. 5. At the end of session the phase 1; student must be able to demonstrate origin of Tibial nerve in back of leg correctly. 6. At the end of session the phase 1; student must be able to demonstratecourse of Tibial nerve in back of leg correctly. 7. At the end of session the phase 1; student must be able to demonstraterelations of Tibial nerve in back of leg correctly. 8. At the end of session the phase 1; student must be able to demonstratebranches of Tibial nerve in back of leg correctly. 9. At the end of session the phase 1; student must be able to describe origin of posterior tibial artery inback of leg correctly. 10. At the end of session the phase 1; student must be able to describe course of posterior tibial artery inback of leg correctly. 11. At the end of session the phase 1; student must be able to describe relations of posterior tibial artery inback of leg correctly. 12. At the end of session the phase 1; student must be able to describe branches of posterior tibial artery inback of leg correctly. 13. At the end of session the phase 1; student must be able to demonstrate origin of posterior tibial artery inback of leg correctly. 14. At the end of session the phase 1; student must be able to	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	demonstratecourse of posterior tibial artery inback of leg correctly. 15. At the end of session the phase 1; student must be able to demonstraterelations of posterior tibial artery inback of leg correctly. 16. At the end of session the phase 1; student must be able to demonstratebranches of posterior tibial artery inback of leg correctly. 17. At the end of session the phase 1; student must be able to describe origin of peroneal artery inback of leg correctly. 18. At the end of session the phase 1; student must be able to describe course of peroneal artery inback of leg correctly. 19. At the end of session the phase 1; student must be able to describe relations of peroneal artery inback of leg correctly. 20. At the end of session the phase 1; student must be able to describe branches of peroneal artery inback of leg correctly. 21. At the end of session the phase 1; student must be able to demonstrate origin of peroneal artery inback of leg correctly. 22. At the end of session the phase 1; student must be able to demonstratecourse of peroneal artery inback of leg correctly. 23. At the end of session the phase 1; student must be able to demonstraterelations of peroneal artery inback of leg correctly. 24. At the end of session the phase 1; student must be able to demonstratebranches of peroneal artery inback of leg correctly. 25. At the end of session the phase 1; student must be able to describe origin of small saphneous vein in back of leg correctly. 26. At the end of session the phase 1; student must be able to describe course of small saphneous vein in back of leg correctly. 27. At the end of session the phase 1; student must be able to describe relations of small saphneous vein in back of leg correctly. 28. At the end of session the phase 1; student must be able to describe branches of small saphneous vein in back of leg correctly. 29. At the end of session the phase 1; student must be able to demonstrate origin of small saphneous vein in back of leg correctly. 30. At the end of session the phase 1; student must be able to demonstratecourse of small saphneous vein in back of leg correctly. 31. At the end of session the phase 1; student must be able to demonstraterelations of small saphneous vein in back of leg correctly. 32. At the end of session the phase 1; student must be able to demonstratebranches of small saphneous vein in back of leg correctly. 33. At the end of session the phase 1; student must be able to describe origin of great saphneous vein in back of leg correctly. 34. At the end of session the phase 1; student must be able to describe course of great saphneous vein in back of leg correctly. 35. At the end of session the phase 1; student must be able to describe relations of great saphneous vein in back of leg correctly.								

	36. At the end of session the phase 1; student must be able to describe branches of great saphneous vein in back of leg correctly. 37. At the end of session the phase 1; student must be able to demonstrate origin of great saphneous vein in back of leg correctly. 38. At the end of session the phase 1; student must be able to demonstratecourse of great saphneous vein in back of leg correctly. 39. At the end of session the phase 1; student must be able to demonstraterelations of great saphneous vein in back of leg correctly. 40. At the end of session the phase 1; student must be able to demonstratebranches of great saphneous vein in back of leg correctly.								
AN19.3	**Explain the concept of "Peripheral heart"** 1. At the end of session the phase 1; student must be able to describe soleus muscle correctly. 2. At the end of session the phase 1; student must be able to describe venous drainage of lower limb correctly. 3. At the end of session the phase 1; student must be able to Explain the concept of "Peripheral heart" correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN19.4	**Explain the anatomical basis of rupture of calcaneal tendon** 1. At the end of session the phase 1; student should be able to describe tendocalcaneous correctly. 2. At the end of session the phase 1; student should be able to Explain the anatomical basis of rupture of calcaneal tendon correctly.	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN19.5	**Describe factors maintaining importance arches of the foot with its importance** 1. At the end of session the phase 1; student must be able to describe factors maintaining arches of foot correctly. 2. At the end of session the phase 1; student must be able to describe importance of arches of the foot correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN19.6	**Explain the anatomical basis of Flat foot & Club foot** 1. At the end of session the phase 1; student should be able to describe flat foot correctly. 2. At the end of session the phase 1; student should be able to describe club foot correctly. 3. At the end of session the phase 1; student should be able to Explain the anatomical basis of Flat foot correctly. 4. At the end of session the phase 1; student should be able to Explain the anatomical basis of Club foot correctly.	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	
AN19.7	**Explain the anatomical basis of Metatarsalgia & Plantar fasciitis** 1. At the end of session the phase 1; student should be able to describe Metatarsalgia correctly. 2. At the end of session the phase 1; student should be able to describe Plantar fascia correctly. 3. At the end of session the phase 1; student should be able to describe Plantar fasciitis correctly. 4. At the end of session the phase 1; student should be able to Explain the	K	KH	N	Lecture	Written/ Viva voce		Orthopedics	

	anatomical basis of Metatarsalgia correctly. 5. At the end of session the phase 1; student should be able to Explain the anatomical basis of Plantar fasciitis correctly.								
Topic: General Features, Joints, radiographs &surfacemarking **Number ofcompetencies:(10)** **Number of procedures for certification:(NIL)**									
AN20.1	**Describe and demonstrate the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply of tibiofibular and ankle joint** 1. At the end of session the phase 1; student must be able to describe type of tibiofibular joint correctly. 2. At the end of session the phase 1; student must be able to describe articular surfaces of tibiofibular joint correctly. 3. At the end of session the phase 1; student must be able to describe capsule of tibiofibular joint correctly. 4. At the end of session the phase 1; student must be able to describe synovial membrane of tibiofibular joint correctly. 5. At the end of session the phase 1; student must be able to describe ligaments of tibiofibular joint correctly. 6. At the end of session the phase 1; student must be able to describe relations of tibiofibular joint correctly. 7. At the end of session the phase 1; student must be able to describe movements of tibiofibular joint correctly. 8. At the end of session the phase 1; student must be able to describe muscles involved in movements of tibiofibular joint correctly. 9. At the end of session the phase 1; student must be able to describe blood supply of tibiofibular joint correctly. 10. At the end of session the phase 1; student must be able to describe nerve supply of tibiofibular joint correctly. 11. At the end of session the phase 1; student must be able to demonstrate type of tibiofibular joint correctly. 12. At the end of session the phase 1; student must be able to demonstrate articular surfaces of tibiofibular joint correctly. 13. At the end of session the phase 1; student must be able to demonstrate capsule of tibiofibular joint correctly. 14. At the end of session the phase 1; student must be able to demonstrate synovial membrane of tibiofibular joint correctly. 15. At the end of session the phase 1; student must be able to demonstrate ligaments of tibiofibular joint correctly. 16. At the end of session the phase 1; student must be able to demonstrate relations of tibiofibular joint correctly. 17. At the end of session the phase 1; student must be able to demonstrate movements of tibiofibular joint correctly. 18. At the end of session the phase 1; student must be able to demonstrate muscles involved in movements of tibiofibular joint correctly. 19. At the end of session the phase 1; student must be able to demonstrate	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	blood supply of tibiofibular joint correctly. 20. At the end of session the phase 1; student must be able to demonstrate nerve supply of tibiofibular joint correctly. 21. At the end of session the phase 1; student must be able to describe type of ankle joint correctly. 22. At the end of session the phase 1; student must be able to describe articular surfaces of ankle joint correctly. 23. At the end of session the phase 1; student must be able to describe capsule of ankle joint correctly. 24. At the end of session the phase 1; student must be able to describe synovial membrane of ankle joint correctly. 25. At the end of session the phase 1; student must be able to describe ligaments of ankle joint correctly. 26. At the end of session the phase 1; student must be able to describe relations of ankle joint correctly. 27. At the end of session the phase 1; student must be able to describe movements of ankle joint correctly. 28. At the end of session the phase 1; student must be able to describe muscles involved in movements of ankle joint correctly. 29. At the end of session the phase 1; student must be able to describe blood supply of ankle joint correctly. 30. At the end of session the phase 1; student must be able to describe nerve supply of ankle joint correctly. 31. At the end of session the phase 1; student must be able to demonstrate type of ankle joint correctly. 32. At the end of session the phase 1; student must be able to demonstrate articular surfaces of ankle joint correctly. 33. At the end of session the phase 1; student must be able to demonstrate capsule of ankle joint correctly. 34. At the end of session the phase 1; student must be able to demonstrate synovial membrane of ankle joint correctly. 35. At the end of session the phase 1; student must be able to demonstrate ligaments of ankle joint correctly. 36. At the end of session the phase 1; student must be able to demonstrate relations of ankle joint correctly. 37. At the end of session the phase 1; student must be able to demonstrate movements of ankle joint correctly. 38. At the end of session the phase 1; student must be able to demonstrate muscles involved in movements of ankle joint correctly. 39. At the end of session the phase 1; student must be able to demonstrate blood supply of ankle joint correctly. 40. At the end of session the phase 1; student must be able to demonstrate nerve supply of ankle joint correctly.								
AN20.2	**Describe the subtalar and transverse tarsal joints** 1. At the end of session the phase 1; student should be able to describe subtalar joints correctly. 2. At the end of session the phase 1; student should be able to describe	K	KH	N	Lecture, DOAP session	Written/ Viva voce			

	transverse tarsal joints correctly. 3. At the end of session the phase 1; student should be able to discuss subtalar joints correctly. 4. At the end of session the phase 1; student should be able to discuss transverse tarsal joints correctly.								
AN20.3	**Describe and demonstrate Fascia lata, Venous drainage, Lymphatic drainage, Retinacula & Dermatomes of lower limb** 1. At the end of session the phase 1; student must be able to describe Fascia lata correctly. 2. At the end of session the phase 1; student must be able to describe Venous drainage of lower limb correctly. 3. At the end of session the phase 1; student must be able to describe Lymphatic drainage of lower limb correctly. 4. At the end of session the phase 1; student must be able to describe Retinacula of lower limb correctly. 5. At the end of session the phase 1; student must be able to describe Dermatomes of lower limb correctly. 6. At the end of session the phase 1; student must be able to demonstrate Fascia lata correctly. 7. At the end of session the phase 1; student must be able to demonstrate Venous drainage of lower limb correctly. 8. At the end of session the phase 1; student must be able to demonstrate Lymphatic drainage of lower limb correctly. 9. At the end of session the phase 1; student must be able to demonstrate Retinacula of lower limb correctly. 10. At the end of session the phase 1; student must be able to demonstrate Dermatomes of lower limb correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN20.4	**Explain anatomical basis of enlarged inguinal lymph nodes** 1. At the end of session the phase 1; student should be able to describe inguinal lymph nodes correctly. 2. At the end of session the phase 1; student should be able to Explain anatomical basis of enlarged inguinal lymph nodes correctly.	K	KH	N	Lecture	Written/ Viva voce		General Surgery	
AN20.5	**Explain anatomical basis of varicose veins and deep vein thrombosis** 1. At the end of session the phase 1; student must be able to describe varicose veins correctly. 2. At the end of session the phase 1; student must be able to describe deep vein thrombosis correctly. 3. At the end of session the phase 1; student must be able to Explain anatomical basis of varicose veins correctly. 4. At the end of session the phase 1; student must be able to Explain anatomical basis of deep vein thrombosis correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	

Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**

AN20.6	**Identify the bones and joints of lower limb seen in anteroposteriorand lateral view radiographs of various regions of lower limb** 1. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of pelvic region correctly. 2. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of pelvic region correctly. 3. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of pelvic region correctly. 4. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of pelvic region correctly. 5. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of pelvic region correctly. 6. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of pelvic region correctly. 7. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of pelvic region correctly. 8. At the end of session the phase 1; student must be able to identify joints of upper limb in anteroposterior view radiographs of pelvic region correctly. 9. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in anteroposterior view radiographs of pelvic region correctly. 10. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of pelvic region correctly. 11. At the end of session the phase 1; student must be able to identify joints of upper limb in lateral view radiographs of pelvic region correctly. 12. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in lateral view radiographs of pelvic region correctly. 13. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of thigh correctly. 14. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of thigh correctly. 15. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of thigh correctly. 16. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of thigh correctly. 17. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of thigh correctly. 18. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of thigh correctly. 19. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of thigh correctly. 20. At the end of session the phase 1; student must be able to identify joints of upper limb in anteroposterior view radiographs of thigh correctly.	K/S	SH	Y	Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment		Radiodiagnosis	

	21. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in anteroposterior view radiographs of thigh correctly. 22. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of thigh correctly. 23. At the end of session the phase 1; student must be able to identify joints of upper limb in lateral view radiographs of thigh correctly. 24. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in lateral view radiographs of thigh correctly. 25. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of knee correctly. 26. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of knee correctly. 27. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of knee correctly. 28. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of knee correctly. 29. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of knee correctly. 30. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of knee correctly. 31. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of leg correctly. 32. At the end of session the phase 1; student must be able to identify bones of upper limb in anteroposterior view radiographs of leg correctly. 33. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of leg correctly. 34. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of leg correctly. 35. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of leg correctly. 36. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of leg correctly. 37. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of leg correctly. 38. At the end of session the phase 1; student must be able to identify joints of upper limb in anteroposterior view radiographs of leg correctly. 39. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in anteroposterior view radiographs of leg correctly. 40. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of leg correctly. 41. At the end of session the phase 1; student must be able to identify joints of upper limb in lateral view radiographs of leg correctly. 42. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in lateral view radiographs of leg correctly. 43. At the end of session the phase 1; student must be able to describe bones of upper limb in anteroposterior view radiographs of foot correctly. 44. At the end of session the phase 1; student must be able to identify								

	bones of upper limb in anteroposterior view radiographs of foot correctly. 45. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in anteroposterior view radiographs of foot correctly. 46. At the end of session the phase 1; student must be able to describe bones of upper limb in lateral view radiographs of foot correctly. 47. At the end of session the phase 1; student must be able to identify bones of upper limb in lateral view radiographs of foot correctly. 48. At the end of session the phase 1; student must be able to demonstrate bones of upper limb in lateral view radiographs of foot correctly. 49. At the end of session the phase 1; student must be able to describe joints of upper limb in anteroposterior view radiographs of foot correctly. 50. At the end of session the phase 1; student must be able to identify joints of upper limb in anteroposterior view radiographs of foot correctly. 51. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in anteroposterior view radiographs of foot correctly. 52. At the end of session the phase 1; student must be able to describe joints of upper limb in lateral view radiographs of foot correctly. 53. At the end of session the phase 1; student must be able to identify joints of upper limb in lateral view radiographs of foot correctly. 54. At the end of session the phase 1; student must be able to demonstrate joints of upper limb in lateral view radiographs of foot correctly.								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN20.7	**Identify & demonstrate important bony landmarks of lower limb: -** **Vertebral levels of highest point of iliac crest, posterior superior iliac spines, iliac tubercle, pubic tubercle, ischial tuberosity, adductor tubercle,** **-Tibial tuberosity, head of fibula,** **-Medial and lateral malleoli, Condyles of femur and tibia, sustentaculum tali, tuberosity of fifth metatarsal, tuberosity of the navicular** **Learning Objectives:** 1. At the end of session phase I student must be able to enumerate bony landmarks of lower limb accurately 2. At the end of session phase I student must be able to describe the vertebral level of highest point of iliac crest accurately. 3. At the end of session phase I student must be able to describe the vertebral level of posterior superior iliac spines accurately. 4. At the end of session phase I student must be able to describe the vertebral level of iliac tubercle accurately. 5. At the end of session phase I student must be able to describe the vertebral level of pubic tubercle accurately. 6. At the end of session phase I student must be able to describe the vertebral level of ischial tuberosity accurately. 7. At the end of session phase I student must be able to describe the vertebral level of adductor tubercle accurately. 8. At the end of session phase I student must be able to describe the vertebral level of tibial tuberosity accurately.. 9. At the end of session phase I student must be able to describe the vertebral level of head of fibula accurately.. 10. At the end of session phase I student must be able to describe the vertebral level of medial and lateral malleoli accurately. 11. At the end of session phase I student must be able to describe the vertebral level of condyles of femur accurately. 12. At the end of session phase I student must be able to describe the vertebral level of condyles of tibia accurately. 13. At the end of session phase I student must be able to describe the vertebral level of sustentaculum tali. accurately. 14. At the end of session phase I student must be able to describe the vertebral level oftuberosity of fifth metatarsal accurately .. 15. At the end of session phase I student must be able to describe the vertebral level oftuberosity of the navicular accurately. 16. At the end of session phase I student must be able to demonstrate the vertebral level of highest point of iliac crest on	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment			

	skeleton correctly. 17. At the end of session phase I student must be able to demonstrate the vertebral level of posterior superior iliac spines correctly. 18. At the end of session phase I student must be able to demonstrate the vertebral level of iliac tubercle correctly. 19. At the end of session phase I student must be able to demonstrate the vertebral level of pubic tubercle correctly. 20. At the end of session phase I student must be able to demonstrate the vertebral level of ischial tuberosity correctly. 21. At the end of session phase I student must be able to demonstrate the vertebral level of adductor tubercle correctly . 22. At the end of session phase I student must be able to demonstrate the vertebral level of tibial tuberosity accurately. 23. At the end of session phase I student must be able to demonstrate the vertebral level of head of fibula accurately. 24. At the end of session phase I student must be able to demonstrate the vertebral level of medial and lateral malleoli correctly. 25. At the end of session phase I student must be able to demonstrate the vertebral level of condyles of femur correctly. 26. At the end of session phase I student must be able to demonstrate the vertebral level of condyles of tibia correctly. 27. At the end of session phase I student must be able to demonstrate the vertebral level of sustentaculum tali correctly. 28. At the end of session phase I student must be able to demonstrate the vertebral level oftuberosity of fifth metatarsal correctly. 29. At the end of session phase I student must be able to demonstrate the vertebral level oftuberosity of the navicular correctly.								
AN20.8	**Identify & demonstrate palpation of femoral, popliteal, post tibial, anti tibial & dorsalis pedis blood vessels in a simulated environment** **Learning Objectives:** 1. At the end of session phase I student must be able to elicit the course of femoral artery in simulated environment correctly. 2. At the end of session phase I student must be able to elicit the course of popliteal artery in simulated environment correctly. 3. At the end of session phase I student must be able to elicit the course of post. tibial artery in simulated environment correctly 4. At the end of session phase I student must be able to elicit the course of ant. tibial artery in simulated environment	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment		General Medicine	

	correctly. 5. At the end of session phase I student must be able to elicit the course of dorsalis pedis artery in simulated environment correctly 6. At the end of session phase I student must be able to demonstrate the palpation of femoral artery in simulated environment accurately. 7. At the end of session phase I student must be able to demonstrate the palpation of popliteal artery in simulated environment accurately. 8. At the end of session phase I student must be able to demonstrate the palpation of post. tibial artery in simulated environment correctly 9. At the end of session phase I student must be able to demonstrate the palpation of ant. tibial artery in simulated environment accurately. 10. At the end of session phase I student must be able to demonstrate the palpation of dorsalis pedis artery in simulated environment accurately.								
AN20.9	**Identify & demonstrate Palpation of vessels (femoral, popliteal,dorsalis pedis,post tibial), Mid inguinal point, Surface projection of: femoral nerve, Saphenous opening, Sciatic, tibial, common peroneal & deep peroneal nerve, Great and small saphenous veins** **Learning Objectives:** 1. At the end of session phase I student must be able to elicit the course of femoral artery correctly. 2. At the end of session phase I student must be able to elicit the course of popliteal artery correctly. 3. At the end of session phase I student must be able to elicit the course of post. tibial artery correctly. 4. At the end of session phase I student must be able to elicit the course of dorsalis pedis artery correctly. 5. At the end of session phase I student must be able to describe the surface anatomy of mid inguinal point correctly 6. At the end of session phase I student must be able to describe the surface anatomy of femoral nerve correctly 7. At the end of session phase I student must be able to describe the surface anatomy of saphenous opening correctly. 8. At the end of session phase I student must be able to describe the surface anatomy of sciatic nerve correctly. 9. At the end of session phase I student must be able to describe the surface anatomy of tibial nerve correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment		General Medicine, General Surgery	

	10. At the end of session phase I student must be able to describe the surface anatomy of common peroneal nerve correctly. 11. At the end of session phase I student must be able to describe the surface anatomy of great saphenous vein accurately. 12. At the end of session phase I student must be able to describe the surface anatomy of small saphenous vein accurately. 11. At the end of session phase I student must be able to demonstrate the palpation of femoral artery in simulated environment accurately. 12. At the end of session phase I student must be able to demonstrate the palpation of popliteal artery in simulated environment accurately. 13. At the end of session phase I student must be able to demonstrate the palpation of post. tibial artery in simulated environment correctly 14. At the end of session phase I student must be able to demonstrate the palpation of ant. tibial artery in simulated environment accurately. 13. At the end of session phase I student must be able to demonstrate the palpation of dorsalis pedis artery in simulated environment accurately. 14. At the end of session phase I student must be able to demonstrate the mid inguinal point on cadaver correctly 15. At the end of session phase I student must be able to demonstrate the course of femoral nerve correctly. 16. At the end of session phase I student must be able todemonstrate the position of saphenous opening correctly. 17. At the end of session phase I student must be able todemonstrate the course of sciatic nerve on cadaver correctly. 18. At the end of session phase I student must be able todemonstrate the course of tibial nerve on cadaver correctly. 19. At the end of session phase I student must be able todemonstrate the course of common peroneal nerve on cadaver correctly. 20. At the end of session phase I student must be able to demonstrate thecourse of great saphenous vein on cadaver accurately. 21. At the end of session phase I student must be able to demonstrate the course of small saphenous vein on cadaver accurately								
AN20.10	**Describe basic concept of development of lower limb** **Learning Objectives :** 1. At the end of session phase Istudent should be able to describe the development of lower limb accurately. 2. At the end of session phase I student should be able to describe	K	KH	N	Lecture	Viva voce			

	the developmental anomalies of lower limb accurately.								
Topic: Thoraciccage		**Number ofcompetencies:(11)**				**Number of procedures for certification:(NIL)**			
AN21.1	**Identify and describe the salient features of sternum, typical rib, Ist rib and typical thoracic vertebra** Learning Objectives : 1. At the end of session phase I student must be able to describe the salient features of sternum accurately. 2. At the end of session phase I student must be able to describe the salient features of typical ribs accurately. 3. At the end of session phase I student must be able to describe the salient features of 1st rib accurately. 4. At the end of session phase I student must be able to describe the salient features of typical thoracic vertebra accurately. 5. At the end of session phase I student must be able to determine the side of sternum accurately. 6. At the end of session phase I student must be able to determine the side of typical rib accurately. 7. At the end of session phase I student must be able to determine the anatomical position of typical thoracic vertebra accurately. 8. At the end of session phase I student must be able to determine the anatomical position of sternum accurately. 9. At the end of session phase I student must be able to determine the anatomical position of typical rib accurately. 10. At the end of session phase I student must be able to determine the anatomical position of 1st ribaccurately.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment			
AN21.2	**Identify & describe the features of 2nd, 11th and 12th ribs, 1st, 11th and 12th thoracic vertebrae** Learning Objectives : 1. At the end of session phase I student should be able to describe the salient features of 2nd rib accurately. 2. At the end of session phase I student should be able to describe the salient features of 11th rib accurately 3. At the end of session phase I student should be able to describe the salient features of12th rib accurately. 4. At the end of session phase I student should be able to describe the salient features of 1st thoracic vertebra accurately. 5. At the end of session phase I student should be able to describe the salient features of 11th thoracic vertebra accurately.	K/S	SH	N	Lecture, DOAP session	Viva voce/ skill assessment			

	6. At the end of session phase I student should be able to describe the salient features of 12th thoracic vertebra accurately. 7. At the end of session phase I student shouldbe able to determine the anatomical position of 2nd rib accurately. 2. At the end of session phase I student should be able to determine the anatomical position of 11th rib accurately 3. At the end of session phase I student should be able to determine the anatomical position of12th rib accurately. 4. At the end of session phase I student should be able to determine the anatomical position of 1st thoracic vertebra accurately. 5. At the end of session phase I student should be able to determine the anatomical position of 11th thoracic vertebra accurately. 6. At the end of session phase I student should be able to determine the anatomical position of 12th thoracic vertebra accurately. 7.At the end of session phase I student should be able to identify the side of 2nd rib accurately. 8. At the end of session phase I student should be able to identify the side of 11th rib accurately. 9. At the end of session phase I student should be able to identify the side of 12th rib accurately.								
AN21.3	Describe & demonstrate the boundaries of thoracic inlet, cavity and outlet Learning Objectives : 1. At the end of session phase I student must be able to describe the boundaries of thoracic inlet accurately. 2. At the end of session phase I student must be able to describe the boundaries of thoracic cavity accurately. 3. At the end of session phase I student must be able to describe the boundaries of thoracic outlet. Accurately. 4. At the end of session phase I student must be able to demonstrate the boundaries of thoracic inlet on skeleton correctly. 5. At the end of session phase I student must be able to demonstrate the boundaries of thoracic cavity on skeleton correctly. 6. At the end of session phase I student must be able to demonstrate the boundaries of thoracic outlet on skeleton correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN21.4	Describe & demonstrate extent, attachments, direction of fibres, nerve supply and actions of intercostal muscles Learning Objectives : 1. At the end of session phase I student must be able to describe the extent of intercostals muscles correctly. 2. At the end of session phase I student must be able to describe the attachments of intercostals muscles correctly. 3. At the end of session phase I student must be able to describe the	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	nerve supplyof intercostals muscles correctly. 4. At the end of session phase I student must be able to describe the action of intercostals muscles correctly. 5. At the end of session phase I student must be able to demonstrate the extent of intercostals muscles on cadavers correctly. 6. At the end of session phase I student must be able to demonstrate the attachments of intercostals muscles on cadavers correctly. 7. At the end of session phase I student must be able to demonstrate the nerve supply of intercostals muscles correctly. 8. At the end of session phase I student must be able to describe the action of intercostals muscles in simulated environment correctly.								
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN21.5	**Describe & demonstrate origin, course, relations and branches of a typical intercostal nerve** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the origin of typical intercostal nerve correctly. 2. At the end of session phase I student must be able to describe the course of typical intercostal nerve correctly. 3. At the end of session phase I student must be able to describe the relation of typical intercostal nerve correctly. 1. At the end of session phase I student must be able to describe the branches of typical intercostal nerve correctly. 2. At the end of session phase I student must be able to describe the applied anatomyof typical intercostal nerve correctly. 3. At the end of session phase I student must be able to demonstrate the origin of typical intercostal nerveon cadavers correctly. 4. At the end of session phase I student must be able to demonstrate the course of typical intercostal nerve on cadaver correctly. 5. At the end of session phase I student must be able to demonstrate the relation of typical intercostal nerve on cadaver correctly. 6. At the end of session phase I student must be able to demonstrate the branches of typical intercostal nerve on cadaver correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

AN21.6	**Mention origin, course and branches/ tributaries of:** **1) anterior & posterior intercostals vessels** **2) internal thoracic vessels** **Learning Objectives :** 1. At the end of session phase I student should be able to describe the origin of anterior intercostal artery correctly. 2. At the end of session phase I student should be able to describe the course of anterior intercostal artery correctly. 3. At the end of session phase I student should be able to describe the branches of anterior intercostal artery correctly. 4. At the end of session phase I student should be able to describe the origin of posterior intercostal artery correctly. 5. At the end of session phase I student should be able to describe the course of posterior intercostal artery correctly. 6. At the end of session phase I student should be able to describe the branches of posterior intercostal artery correctly. 7. At the end of session phase I student should be able to describe the origin of internal thoracic artery correctly. 8. At the end of session phase I student should be able to describe the course of internal thoracic artery correctly. 9. At the end of session phase I student should be able to describe the branches of internal thoracic artery correctly. 10. At the end of session phase I student should be able to describe the origin of anterior intercostal vein correctly. 11. At the end of session phase I student should be able to describe the course of anterior intercostal vein correctly. 12. At the end of session phase I student should be able to describe the tributaries of anterior intercostal artery correctly. 13. At the end of session phase I student should be able to describe the origin of posterior intercostal vein correctly. 14. At the end of session phase I student should be able to describe the course of posterior intercostal vein correctly. 15. At the end of session phase I student should be able to describe the tributaries of posterior intercostal vein correctly. 16. At the end of session phase I student should be able to describe the origin of internal thoracic vein correctly. 17. At the end of session phase I student should be able to describe the course of internal thoracic vein correctly. 18. At the end of session phase I student should be able to describe the tributaries of internal thoracic vein correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce			
AN21.7	**Mention the origin, course, relations and branches of** **1) typical intercostal nerve** **2) superior intercostal artery, subcostal artery** **Learning Objectives :** 1. At the end of session phase I student should be able to describe the	K	KH	N	Lecture	Written			

	origin of typical intercostal nerve correctly. 2. At the end of session phase I student should be able to describe the course of typical intercostal nerve correctly. 3. At the end of session phase I student should be able to describe the relations of typical intercostal nerve correctly. 4. At the end of session phase I student should be able to describe the origin of superior intercostal artery correctly. 5. At the end of session phase I student should be able to describe the course of superior intercostal artery correctly. 6. At the end of session phase I student should be able to describe the relations of typical intercostal artery correctly. 7. At the end of session phase I student should be able to describe the origin of subcostal artery correctly. 8. At the end of session phase I student should be able to describe the course of subcostal artery correctly. 9. At the end of session phase I student should be able to describe the relations of subcostal artery correctly.								
AN21.8	**Describe & demonstrate type, articular surfaces & movements of manubriosternal, costovertebral, costotransverse and xiphisternal joints** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the type, articular surfaces and movements of manubriosternal joint correctly. 2. At the end of session phase I student must be able to describe the type, articular surfaces and movements of costovertebral joint correctly. 3. At the end of session phase I student must be able to describe the type, articular surfaces and movements of costotransverse joint correctly 4. At the end of session phase I student must be able to describe the type, articular surfaces and movements of xiphisternal joint correctly. 5. At the end of session phase I student must be able to demonstrate the manubriosternal joint on skeleton correctly. 6. At the end of session phase I student must be able to demonstrate the costovertebral joint on skeleton correctly. 7. At the end of session phase I student must be able to demonstrate the costotransverse joint on skeleton correctly 8. At the end of session phase I student must be able to demonstrate the xiphisternal joint on the skeleton correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

AN21.9	**Describe & demonstrate mechanics and types of respiration** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the mechanics of respiration correctly. 2. At the end of session phase I student must be able to describe the types of respiration correctly. 3. At the end of session phase I student must be able to demonstrate the mechanic of respiration in simulated environment correctly 4. At the end of session phase I student must be able to differentiate the types of respiration correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			Physiology
AN21.10	**Describe costochondral and interchondral joints** **Learning Objectives:** 1. At the end of session phase I student should be able to describe the costochondral joint correctly. 2. At the end of session phase I student should be able to describe the interchondral joint correctly. 3. At the end of session phase I student should be able to describe the applied anatomy costochondral joint correctly. 4. At the end of session phase I student should be able to describe the applied anatomy interchondral joint correctly.	K	KH	N	Lecture	Written			
AN21.11	**Mention boundaries and contents of the superior, anterior, middle and posterior mediastinum** **Learning Objectives :** 5. At the end of session phase I student must be able to describe the boundary of anterior mediastinum correctly. 6. At the end of session phase I student must be able to describe the boundary of middle mediastinum correctly. 7. At the end of session phase I student must be able to describe the boundary of posterior mediastinum correctly. 8. At the end of session phase I student must be able to describe the content of anterior mediastinum correctly. 9. At the end of session phase I student must be able to describe the content of middle mediastinum correctly. 10. At the end of session phase I student must be able to describe the content of posterior mediastinum correctly. 11. At the end of session phase I student must be able to describe the applied anatomy of anterior mediastinum correctly. 12. At the end of session phase I student must be able to describe the applied anatomy of posterior mediastinum correctly. 13. At the end of session phase I student must be able to describe the applied anatomy of posterior mediastinum correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce			
Topic: Heart&Pericardium			**Number ofcompetencies:(7)**			**Number of procedures for certification:(NIL)**			

AN22.1	**Describe & demonstrate subdivisions, sinuses in pericardium, blood supply and nerve supply of pericardium** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the subdivisions of pericardium correctly. 2. At the end of session phase I student must be able to describe the sinuses of pericardium correctly. 3. At the end of session phase I student must be able to describe the blood supply of pericardium correctly. 4. At the end of session phase I student must be able to describe the nerve supply of pericardium correctly 5. At the end of session phase I student must be able to demonstrate the subdivisions of pericardium on cadaver correctly. 6. At the end of session phase I student must be able to demonstrate the sinuses of pericardium on cadaver correctly. 7. At the end of session phase I student must be able to demonstrate the blood supply of pericardium on cadaver correctly. 8. At the end of session phase I student must be able to demonstrate the nerve supply of pericardium on cadaver correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN22.2	**Describe & demonstrate external and internal features of each chamber of heart** **Learning Objectives :** 1. At the end of session phase I student must be able to elicit the external features of each chambers of heart correctly. 2. At the end of session phase I student must be able to elicit the internal features of each chambers of heart correctly. 3. At the end of session phase I student must be able to demonstrate the external features of each chambers of heart on cadaveric heart correctly 4. At the end of session phase I student must be able to demonstrate the internal features of each chambers of heart on cadaveric heart correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			Physiology
AN22.3	**Describe & demonstrate origin, course and branches of coronary arteries** **Learning Objectives:** 1. At the end of session phase I student must be able to describe origin of coronary arteries correctly. 2. At the end of session phase I student must be able to describe course of coronary arteries correctly. 3. At the end of session phase I student must be able to describe branches of coronary arteries correctly. 4. At the end of session phase I student must be able to demonstrate origin of coronary arteries on cadaveric heart correctly. 5. At the end of session phase I student must be able todemonstrate	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			Physiology

	course of coronary arteries on cadaveric heart correctly. 6. At the end of session phase I student must be able to demonstrate branches of coronary arteries on cadaveric heart correctly.								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN22.4	**Describe anatomical basis of ischaemic heart disease** **Learning Objectives:** 1. At the end of session phase I student must be able to describe blood supply of heart correctly. 2. At the end of session phase I student must be able to enumerate ischaemic heart disease correctly. 3. At the end of session phase I student must be able to elicit the anatomical basis of ischaemic heart disease correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Physiology
AN22.5	**Describe & demonstrate the formation, course, tributaries and termination of coronary sinus** **Learning Objectives:** 1. At the end of session phase I student must be able to describe formation of coronary sinus correctly. 2. At the end of session phase I student must be able to describe course of coronary sinus correctly. 3. At the end of session phase I student must be able to describe tributaries of coronary sinus correctly. 4. At the end of session phase I student must be able to demonstrate the formation of coronary sinus on cadaveric heart correctly. 5. At the end of session phase I student must be able to demonstrate course of coronary sinus on cadaveric heart correctly. 6. At the end of session phase I student must be able to describe tributaries of coronary sinus on cadaveric heart correctly. 7. At the end of session phase I student must be able to describe the clinical anatomy of coronary sinus on cadaveric heart correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN22.6	**Describe the fibrous skeleton of heart** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the fibrous skeleton correctly. 2. At the end of session phase I student must be able to describe the parts of fibrous skeleton correctly.	K	KH	Y	Lecture	Written			
AN22.7	**Mention the parts, position and arterial supply of the conducting system of heart** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the parts of conducting system of heart correctly. 2. At the end of session phase I student must be able to describe the position of conducting system of heart correctly. 3. At the end of session phase I student must be able to describe the	K	KH	Y	Lecture	Written		General Medicine	Physiology

	arterial supply of conducting system of heart correctly. 4. At the end of session phase I student must be able to describe the clinical anatomy of conducting system of heart correctly.								
Topic: Mediastinum		**Number ofcompetencies:(7)**				**Number of procedures for certification:(NIL)**			
AN23.1	**Describe & demonstrate the external appearance, relations, blood supply, nerve supply,lymphatic drainage and applied anatomy of oesophagus Learning Objectives:** 1. At the end of session phase I student must be able to describe the external features of oesophagus correctly. 2. At the end of session phase I student must be able to describe the relations of oesophagus correctly. 3. At the end of session phase I student must be able to describe the blood supply of oesophagus correctly 4. At the end of session phase I student must be able to describe the nerve supply of oesophagus correctly. 5. At the end of session phase I student must be able to describe the lymphatic drainage of oesophagus correctly. 6. At the end of session phase I student must be able to describe the applied anatomy of oesophagus correctly. 7. At the end of session phase I student must be able to demonstrate the external features of oesophagus on cadaver correctly. 2. At the end of session phase I student must be able to demonstrate the relations of oesophagus on cadaver correctly. 3. At the end of session phase I student must be able to demonstrate the blood supply of oesophagus on cadaver correctly 4. At the end of session phase I student must be able to demonstrate the nerve supply of oesophagus on cadaver correctly. 5. At the end of session phase I student must be able to demonstrate the lymphatic drainage of oesophagus on cadaver correctly.	K/S	SH	Y	Practical, Lecture, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN23.2	**Describe & demonstrate the extent, relations tributaries of thoracic duct and enumerate its applied anatomy** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the external features of thoracic duct correctly. 2.At the end of session phase I student must be able to describe the relations of thoracic duct correctly. At the end of session phase I student must be able to describe the tributaries of thoracic duct correctly. 3.At the end of session phase I student must be able to describe the applied anatomy of thoracic duct correctly. 4. At the end of session phase I student must be able to demonstrate the	K/S	SH	Y	Practical, Lecture, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	

	extent of thoracic duct on cadaver correctly. 5. At the end of session phase I student must be able to demonstrate the relations of thoracic duct on cadaver correctly. 6. At the end of session phase I student must be able to demonstrate the tributaries of thoracic duct accurately.								
AN23.3	**Describe & demonstrate origin, course, relations, tributaries and termination of superior venacava, azygos, hemiazygos and accessory hemiazygos veins** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the extent, course, relations, tributaries of superior vena cava correctly. 2. At the end of session phase I student must be able to describe the extent, course, relations, tributaries of azygous vein correctly. 3. At the end of session phase I student must be able to describe the extent, course, relations, tributaries of hemi azygous vein correctly. 4. At the end of session phase I student must be able to describe the extent, course, relations, tributaries of accessory hemi azygous vein correctly. 5. At the end of session phase I student must be able to demonstrate the extent, course, relations, and tributaries of superior vena cava correctly. 6.. At the end of session phase I student must be able to demonstrate the extent, course, relations, and tributaries of azygous vein correctly. 7. At the end of session phase I student must be able to demonstrate the extent, course, relations, and tributaries of hemi azygous vein correctly. 8. At the end of session phase I student must be able to demonstrate the extent, course, relations, and tributaries of accessory hemi azygous vein correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN23.4	**Mention the extent, branches and relations of arch of aorta & descending thoracic aorta** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the extent, branches & relations of arch of aorta correctly. 2. At the end of session phase I student must be able to describe the extent, branches & relations of descending thoracic aorta correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce			
AN23.5	**Identify & Mention the location and extent of thoracic sympathetic chain Learning Objectives:** 1. At the end of session phase I student must be able to describe the location & extent of thoracic sympathetic chain correctly. 2.At the end of session phase I student must be able to identify the thoracic sympathetic chain on cadaver correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

AN23.6	**Describe the splanchnic nerves** **Learning Objectives:** 1. At the end of session phase I student should be able to describe the splanchnic nerves correctly. 2. At the end of session phase I student should be able to demonstrate the splanchnic nerves correctly	K	KH	N	Lecture	Written			
AN23.7	**Mention the extent, relations and applied anatomy of lymphatic duct** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the extent of lymphatic duct correctly. 2.At the end of session phase I student must be able to describe the relations of lymphatic duct correctly 3. At the end of session phase I student must be able to describe the applied anatomy of lymphatic duct correctly. 4. At the end of session phase I student must be able to demonstrate the extent of lymphatic duct correctly. 5.At the end of session phase I student must be able to demonstrate the relations of lymphatic duct correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	

Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
Topic: Lungs&Trachea		**Number ofcompetencies:(6)**				**Number of procedures for certification:(NIL)**			
AN24.1	**Mention the blood supply, lymphatic drainage and nerve supply of pleura, extent of pleura and describe the pleural recesses and their applied anatomy** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the extent of pleura correctly. 2. At the end of session phase I student must be able to describe the blood supply of pleura correctly. 3. At the end of session phase I student must be able to describe the nerve supply of pleura correctly. 4. At the end of session phase I student must be able to describe the lymphatic drainage of pleura correctly. 5.At the end of session phase I student must be able to describe the pleural recesses correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Medicine	Physiology
AN24.2	**Identify side, external features and relations of structures which form root of lung & bronchial tree and their clinical correlate** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the root	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Medicine	Physiology

	of lung correctly. 2.At the end of session phase I student must be able to describe the external features of root of lung correctly 3. At the end of session phase I student must be able to describe the relations of root of lung correctly. 4. At the end of session phase I student must be able to identify the side of root of lung correctly. 5. At the end of session phase I student must be able to describe the bronchial tree correctly. 2.At the end of session phase I student must be able to describe the external features of bronchial tree correctly 3. At the end of session phase I student must be able to describe the relations of bronchial tree correctly. 4. At the end of session phase I student must be able to identify the side of bronchial tree correctly.								
AN24.3	**Describe a bronchopulmonary segment** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the broncho pulmonary segment correctly. 2. At the end of session phase I student must be able to describe the applied anatomy of broncho pulmonary segment correctly. 3. At the end of session phase I student must be able to demonstrate the broncho pulmonary segments on lungs correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Physiology
AN24.4	**Identify phrenic nerve & describe its formation & distribution** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the formation of phrenic nerve correctly. 2. At the end of session phase I student must be able to describe the distribution of phrenic nerve correctly. 3. At the end of session phase I student must be able to demonstrate the phrenic nerve on cadaver correctly.	K/S	SH	Y	Lecture, Practical	Written/ Viva voce			
AN24.5	**Mention the blood supply, lymphatic drainage and nerve supply of lungs** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the blood supply of lung correctly. 2. At the end of session phase I student must be able to describe the nerve supply of lung correctly. 3. At the end of session phase I student must be able to describe the lymphatic drainage of lung correctly. 4. At the end of session phase I student must be able to describe the lymphatic drainage of lung correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN24.6	**Describe the extent, length, relations, blood supply, lymphatic drainage and nerve supply of trachea** **Learning Objectives:**	K	KH	N	Lecture	Written			

	1. At the end of session phase I student should be able to describe the extent of trachea correctly. 2. At the end of session phase I student should be able to describe the length of trachea correctly. . 3. At the end of session phase I student should be able to describe the blood supply of trachea correctly. 4. At the end of session phase I student should be able to describe the nerve supply of trachea correctly. 5. At the end of session phase I student should be able to describe the lymphatic drainage of trachea correctly. 6. At the end of session phase I student should be able to demonstrate the trachea on cadaver correctly.								
Topic: Thorax		**Number ofcompetencies:(9)**				**Number of procedures for certification:(01)**			
AN25.1	**Identify, draw and label a slide of trachea and lung** **Learning Objectives:** 1. At the end of session phase I student must be able to identify the slide of trachea correctly. 2. At the end of session phase I student must be able to draw the slide of trachea correctly. 3. At the end of session phase I student must be able to label the slide of trachea correctly. 4. At the end of session phase I student must be able to identify the slide of lung correctly. 2. At the end of session phase I student must be able to draw the slide of lung correctly. 3. At the end of session phase I student must be able to label the slide of lung correctly.	K/S	SH	Y	Lecture, Practical	Written/ skill assessment	1		
AN25.2	**Describe development of pleura, lung & heart** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the development of pleura correctly. 2. At the end of session phase I student must be able to describe the development of lung correctly. 3. At the end of session phase I student must be able to describe the development of heart correctly. 4. At the end of session phase I student must be able to describe the developmental anomalies of pleura correctly. 5. At the end of session phase I student must be able to describe the developmental anomalies of lung correctly. 6. At the end of session phase I student must be able to describe the developmental anomalies of heart correctly.	K	KH	Y	Lecture	Written			

AN25.3	**Describe fetal circulation and changes occurring at birth** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the foetal circulation correctly. 2.At the end of session phase I student must be able to describe the changes in foetal circulation at birth correctly. 3. At the end of session phase I student must be able to describe the anomalies of foetal circulation correctly.	K	KH	Y	Lecture	Written		General Medicine	Physiology
AN25.4	**Describe embryological basis of:** **1) atrial septal defect, 2) ventricular septal defect, 3) Fallot's tetralogy &** **4) tracheo-oesophageal fistula** **Learning Objectives:** 1. At the end of session phase I student must be able to describe the atrioseptal defects correctly. 2.At the end of session phase I student must be able to enumerate the atrioseptal defects correctly. 3. At the end of session phase I student must be able to describe the ventricular septal defects correctly. 4. At the end of session phase I student must be able to enumerate the ventricular septal defects correctly. 5. At the end of session phase I student must be able to describe the trachea- oesophageal fistula correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine, Pediatrics	Physiology
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN25.5	**Describe developmental basis of congenital anomalies, transposition of great vessels, dextrocardia, patent ductus arteriosus and coarctation of aorta** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the anatomy of heart vessels correctly. 2. At the end of session phase I student must be able to describe the congenital anomalies of great vessels correctly. 3. At the end of session phase I student must be able to describe the developmental basis of dextrocardia correctly. 4. At the end of session phase I student must be able to describe the developmental basis of patent ductus arteriosus correctly. 5. At the end of session phase I student must be able to describe the developmental basis of coarctation of aorta correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine, Pediatrics	Physiology
AN25.6	**Mention development of aortic arch arteries, SVC, IVC and coronary sinus** **Learning Objectives :**	K	KH	N	Lecture	Written/ Viva voce			

	1. At the end of session phase I student should be able to describe the development of aortic arch correctly. 2. At the end of session phase I student should be able to describe the development of SVC correctly. 3. At the end of session phase I student should be able to describe the development of IVC correctly. 4. At the end of session phase I student should be able to describe the development of coronary sinus correctly. 5. At the end of session phase I student should be able to describe the developmental anomalies of aortic arch correctly. 2. At the end of session phase I student should be able to describe the developmental anaomalies of SVC correctly. 3. At the end of session phase I student should be able to describe the developmental anaomalies of IVC correctly. 4. At the end of session phase I student should be able to describe the developmental anomalies of coronary sinus correctly.								
AN25.7	**Identify structures seen on a plain x-ray chest (PA view)** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the plain X – ray chest correctly. 2. At the end of session phase I student must be able to identify the plain X – ray chest correctly. 3. At the end of session phase I student must be able to demonstrate the features on plain X – ray chest correctly.	K/S	SH	Y	Practical, DOAP session	Written/ Viva voce		Radiodiagnosis, General Medicine	
AN25.8	**Identify and describe in brief a barium swallow** **Learning Objectives :** 1. At the end of session phase I student should be able to describe the barium swallow correctly. 2. At the end of session phase I student should be able to identify the barium swallow correctly.	K/S	SH	N	Practical, DOAP session	Written/ Viva voce		Radiodiagnosis, General Medicine	
AN25.9	**Demonstrate surface marking of lines of pleural reflection, lung borders and fissures, trachea, heart borders, apex beat & surface projection of valves of heart** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the surface marking of lines of pleural reflection correctly. 2. At the end of session phase I student must be able to describe the surface marking of lung borders and fissures correctly. 3. At the end of session phase I student must be able to describe the surface marking of lines of trachea correctly. 4. At the end of session phase I student must be able to describe the surface marking of lines of heart borders correctly. 5. At the end of session phase I student must be able to describe	K/S	SH	Y	Practical	Viva voce/ skill assessment		General Medicine, Pediatrics	Physiology

	the surface marking of lines of valves of heart correctly 6. . At the end of session phase I student must be able to demonstrate the surface marking of lines of pleural reflection in simulated environment correctly. 7. At the end of session phase I student must be able to demonstrate the surface marking of lung borders and fissures in simulated environment correctly. 8. At the end of session phase I student must be able to demonstrate the surface marking of lines of trachea in simulated environment correctly. 9. At the end of session phase I student must be able to demonstrate the surface marking of lines of heart borders in simulated environment correctly. 10. At the end of session phase I student must be able to demonstrate the surface marking of lines of valves of heart in simulated environment correctly.								
Topic:Skullosteology		**Number ofcompetencies:(7)**				**Number of procedures for certification:(NIL)**			
AN26.1	**Demonstrate anatomical position of skull, Identify and locate individual skull bones in skull** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the skull correctly. 2. At the end of session phase I student must be able to describe the individual bones of skull correctly. 3.At the end of session phase I student must be able to describe the anatomical position of skull correctly. 4.At the end of session phase I student must be able to identify the individual bones of skull correctly. 5. At the end of session phase I student must be able to locate the individual bones on skull correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment			
AN26.2	**Describe the features of norma frontalis, verticalis, occipitalis, lateralis and basalis** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the features of norma frontalis correctly. 2. At the end of session phase I student must be able to describe the features of norma verticalis correctly. 3. At the end of session phase I student must be able to describe the features of norma occipitalis correctly. 4. At the end of session phase I student must be able to describe the features of norma lateralis correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment			

	5. At the end of session phase I student must be able to describe the features of norma basalis correctly. 6. At the end of session phase I student must be able to describe the individual bones of norma frontalis correctly. 7. At the end of session phase I student must be able to describe the individual bones of norma verticalis correctly. 8. At the end of session phase I student must be able to describe the individual bones of norma occipitalis correctly. 9. At the end of session phase I student must be able to describe the individual bones of norma lateralis correctly. 10. At the end of session phase I student must be able to describe the individual bones of norma basalis correctly.								
AN26.3	**Describe cranial cavity, its subdivisions, foramina and structures passing through them** **Learning Objectives :** 1.At the end of session phase I student must be able to describe the features of cranial cavity correctly. 2.At the end of session phase I student must be able to describe the subdivisions of cranial cavity correctly. 3.At the end of session phase I student must be able to describe the foramina of cranial cavity correctly. 4. At the end of session phase I student must be able to describe the structures passing through foramina of cranial cavity correctly. 5.At the end of session phase I student must be able to demonstrate the foramina of cranial cavity on correctly. 6. At the end of session phase I student must be able to demonstrate the structures passing through foramina of cranial cavity correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment			
AN26.4	**Describe morphological features of mandible** **Learning Objectives :** 1.At the end of session phase I student must be able to describe the external features of mandible correctly. 2.At the end of session phase I student must be able to describe the foramina of mandible correctly. 3. At the end of session phase I student must be able to demonstrate the structures passing through foramina of mandible correctly. 5. At the end of session phase I student must be able to demonstrate the external features of mandible correctly. 6. At the end of session phase I student must be able to demonstrate the foramina of mandible correctly. 7. At the end of session phase I student must be able to demonstrate the structures passing through foramina of mandible correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment			

AN26.5	**Describe features of typical and atypical cervical vertebrae (atlas and axis)** **Learning Objectives :** 1.At the end of session phase I student must be able to describe the external features of typical cervical vertebrae correctly. 2.At the end of session phase I student must be able to describe the external features of atypical cervical vertebrae correctly. 3. At the end of session phase I student must be able to identify the typical cervical vertebrae correctly. 4.At the end of session phase I student must be able to identify the atypical cervical vertebrae correctly. 5.At the end of session phase I student must be able to demonstrate the feature of typical cervical vertebrae correctly. 4.At the end of session phase I student must be able to demonstrate the feature of atypical cervical vertebrae correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment			
AN26.6	**Explain the concept of bones that ossify in membrane** **Learning Objectives :** 1. At the end of session phase I student must be able to define the ossification correctly. 2. At the end of session phase I student must be able to enumerate different types of ossification correctly. 3.At the end of session phase I student must be able to differentiate in between different types of ossification correctly. 4. At the end of session phase I student must be able to describe membranous ossification correctly. 5. At the end of session phase I student must be able to enumerate bones that ossify in membrane correctly.	K	KH	N	Lecture	Viva voce			
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN26.7	**Describe the features of the 7th cervical vertebra** **Learning Objectives :** 1. At the end of session phase I student should be able to discuss the 7th cervical vertebra correctly 2. At the end of session phase I student should be able to identify the 7th cervical vertebra correctly. 3. At the end of session phase I student should be able to demonstrate the features of the 7th cervical vertebra correctly.	K/S	SH	N	DOAP session	Viva voce			
Topic:Scalp			**Number ofcompetencies:(2)**			**Number of procedures for certification:(NIL)**			

AN27.1	**Describe the layers of scalp, its blood supply, its nerve supply and surgical importance** **Learning Objectives :** 1.At the end of session phase I student must be able to describe the layers of scalp correctly. 2. At the end of session phase I student must be able to describe the blood supply of scalp correctly. 3. At the end of session phase I student must be able to describe the nerve supply of scalp correctly. 4 At the end of session phase I student must be able to describe the applied anatomy of scalp correctly. 5.At the end of session phase I student must be able to demonstrate the layers of scalp on cadaver correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce		General Surgery	
AN27.2	**Describe emissary veins with its role in spread of infection from extracranial route to intracranial venous sinuses** **Learning Objectives :** 1. At the end of session phase I student must be able to define the emissary vein correctly. 2. At the end of session phase I student must be able to discuss the features of emissary vein correctly. 3.At the end of session phase I student must be able to discuss the role of emissary vein in spread of infection from extracranial to intracranial route correctly.	K	KH	Y	Lecture	Written			
Topic: Face &parotidregion		**Number ofcompetencies:(10)**				**Number of procedures for certification:(NIL)**			
AN28.1	**Describe & demonstrate muscles of facial expression and their nerve supply** **Learning Objectives :** 1. At the end of session phase I student must be able to enumerate the muscles of facial expression correctly. 2.At the end of session phase I student must be able to discuss the actions of muscles of facial expression correctly. 3. At the end of session phase I student must be able to discuss the nerve supply of muscles of facial expression correctly. 4. At the end of session phase I student must be able to discuss the clinical testing of actions of muscles of facial expression correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN28.2	**Describe sensory innervation of face** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the sensory nerve supply of face correctly. 2. At the end of session phase I student must be able to describe the applied anatomy of sensory nerve supply of face correctly	K	KH	Y	Practical, Lecture	Written/ Viva voce			

AN28.3	**Describe & demonstrate origin /formation, course, branches /tributaries of facial vessels** **Learning Objectives :** 1. At the end of session phase I student must be able to enumerate the facial vessels correctly. 2. At the end of session phase I student must be able to describe the origin of the facial artery correctly. 3. At the end of session phase I student must be able to describe the course of the facial artery correctly. 4.At the end of session phase I student must be able to describe the branches of the facial artery correctly. 5.At the end of session phase I student must be able to describe the formation of the facial vein correctly. 6.. At the end of session phase I student must be able to describe the course of the facial vein correctly. 7.At the end of session phase I student must be able to describe the tributaries of the facial vein correctly. 8.At the end of session phase I student must be able to demonstrate the facial vessels on cadaver correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN28.4	**Describe & demonstrate branches of facial nerve with distribution** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the facial nerve correctly. 2. At the end of session phase I student must be able to describe the branches of facial nerve correctly. At the end of session phase I student must be able to describe the applied anatomy of facial nerve correctly. 3. At the end of session phase I student must be able to demonstrate the facial nerve on cadaver correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN28.5	**Describe cervical lymph nodes and lymphatic drainage of head, face and neck** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the cervical lymph nodes correctly. 2. At the end of session phase I student must be able to describe the lymphatic drainage of head, face and neck correctly. 3. At the end of session phase I student must be able to demonstrate the cervical lymph nodes correctly.	K	KH	Y	Practical, Lecture	Written/ Viva voce			
AN28.6	**Identify superficial muscles of face, their nerve supply and actions** **Learning Objectives :** 1. At the end of session phase I student must be able to enumerate the superficial muscles of face correctly. 2. At the end of session phase I student must be able to describe the	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	attachment of the superficial muscles of face correctly. 3. At the end of session phase I student must be able to describe the nerve supply of the superficial muscles of face correctly. 4. At the end of session phase I student must be able to describe the action of the superficial muscles of face correctly. 5. At the end of session phase I student must be able to describe the applied anatomy of the superficial muscles of face correctly								
AN28.7	**Explain the anatomical basis of facial nerve palsy** **Learning Objectives :** 1. At the end of session phase I student must be able to describe the course of facial nerve correctly. 2. At the end of session phase I student must be able to describe the distribution of facial nerve correctly. 3. At the end of session phase I student must be able to discuss the applied anatomy of facial nerve correctly.	K	KH	Y	Lecture	Written		General Medicine	
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN28.8	**Explain surgical importance of deep facial vein** **Objectives** 1. At the end of session the phase 1 student must be able to describe the course of deep facial vein accurately. 2. At the end of session the phase 1 student must be able to explain surgical importance of deep facial vein correctly.	K	KH	Y	Lecture	Written		General Surgery	
AN28.9	**Describe & demonstrate the parts, borders, surfaces, contents, relations and nerve supply of parotid gland with course of its duct and surgical importance** **Objectives** 1. At the end of session the phase 1 student must be able to describe the location of parotid gland correctly. 2. At the end of session the phase 1 student must be able to explain the parts of parotid gland correctly. 3. At the end of session the phase 1 student must be able to identify the location of parotid gland correctly. 4. At the end of session the phase 1 student must be able to demonstrate the parts of parotid gland correctly 5. At the end of session the phase 1 student must be able to describe the borders of parotid gland correctly. 6. At the end of session the phase 1 student must be able to demonstrate the borders of parotid gland correctly. 7. At the end of session the phase 1 student must be able to describe the	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	

	surfaces of parotid gland correctly.. 8. At the end of session the phase 1 student must be able to demonstrate the surfaces of parotid gland correctly. 9. At the end of session the phase 1 student must be able to describe the contents of parotid gland correctly 10. At the end of session the phase 1 student must be able to enumerate the contents of parotid gland correctly. 11. At the end of session the phase 1 student must be able to demonstrate the contents of parotid gland correctly. 12. At the end of session the phase 1 student must be able to describe the relations of parotid gland correctly. 13. At the end of session the phase 1 student must be able to demonstrate the relations of parotid gland correctly. 14. At the end of session the phase 1 student must be able to describe the nerve supply of parotid gland correctly. 15. At the end of session the phase 1 student must be able to demonstrate the nerve supply of parotid gland correctly 16. At the end of session the phase 1 student must be able to describe the course of parotid duct correctly. 17. At the end of session the phase 1 student must be able to demonstrate the course of parotid duct correctly.. 18. At the end of session the phase 1 student must be able to describe the surgical importance of parotid gland accurately. 19. At the end of session the phase 1 student must be able to record the surgical importance of parotid gland accurately.								
AN28.10	**Explain the anatomical basis of Frey's syndrome** **Objectives** 1. At the end of session the phase 1 student should be able to define the Frey's syndrome accurately. 2. At the end of session the phase 1 student should be able to explain the anatomical basis of Frey's syndrome correctly.	K	KH	N	Lecture	Written		General Surgery	
Topic: Posterior triangleofneck		**Number ofcompetencies:(4)**				**Number of procedures for certification:(NIL)**			
AN29.1	**Describe & demonstrate attachments, nerve supply, relations and actions of sternocleidomastoid** **Objectives** 1. At the end of session the phase 1 student must be able to describe the attachments of sternocleidomastoid correctly. 2. At the end of session the phase 1 student must be able to demonstrate the attachments of sternocleidomastoid correctly. 3. At the end of session the phase 1 student must be able to describe the nerve supply of sternocleidomastoid correctly. 4. At the end of session the phase 1 student must be able to demonstrate	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	the nerve supply of sternocleidomastoid correctly. 5. At the end of session the phase 1 student must be able to describe the relations of sternocleidomastoid correctly. 6. At the end of session the phase 1 student must be able to demonstrate the relations of sternocleidomastoid correctly. 7. At the end of session the phase 1 student must be able to explain the actions of sternocleidomastoid correctly. 8. At the end of session the phase 1 student must be able to demonstrate the actions of sternocleidomastoid correctly. 9. At the end of session the phase 1 student must be able to discuss the applied anatomy sternocleidomastoid correctly.								
AN29.2	**Explain anatomical basis of Erb's & Klumpke's palsy** **Objectives** 1. At the end of session the phase 1 student must be able to define the Erb's palsy accurately. 2. At the end of session the phase 1 student must be able to disuss the anatomical basis of of Erb's palsy correctly. 3. At the end of session the phase 1 student must be able to define the Klumpke's palsy accurately. 4. At the end of session the phase 1 student must be able to disuss the anatomical basis of Klumpke's palsy correctly.	K	KH	Y	Lecture	Written		General Surgery	
AN29.3	**Explain anatomical basis of wry neck** **Objectives** 1. At the end of session the phase 1 student should be able to define the wry neck accurately. 2. At the end of session the phase 1 student should be able to explain the anatomical basis of wry neck correctly.	K	KH	N	Lecture	Written		General Surgery	
AN29.4	**Describe & demonstrate attachments of 1) inferior belly of omohyoid, 2)scalenus anterior, 3) scalenus medius & 4) levator scapulae** **Objectives** 1. At the end of session the phase 1 student should be able to describe the origin of inferior belly of omohyoid correctly 2. At the end of session the phase 1 student should be able to describe the insertion of inferior belly of omohyoid correctly 3. At the end of session the phase 1 student should be able to explain the action of inferior belly of omohyoid 4. At the end of session the phase 1 student should be able to identify the origin of inferior belly of omohyoid correctly 5. At the end of session the phase 1 student should be able to identify the insertion of inferior belly of omohyoid correctly 6. At the end of session the phase 1 student should be able to demonstrate the origin of inferior belly of omohyoid correctly 7. At the end of session the phase 1 student should be able to demonstrate the insertion of inferior belly of omohyoid correctly	K/S	SH	N	Lecture, Practical	Written/ Viva voce			

	8. At the end of session the phase 1 student should be able to demonstrate the action of inferior belly of omohyoid accurately 9. At the end of session the phase 1 student should be able to describe the origin of scalenus anterior correctly 10. At the end of session the phase 1 student should be able to describe the insertion of scalenus anterior correctly 11. At the end of session the phase 1 student should be able to explain the action of scalenus anterior correctly. 12. At the end of session the phase 1 student should be able to identify the origin of scalenus anterior correctly 13. At the end of session the phase 1 student should be able to identify the insertion of scalenus anterior correctly 14. At the end of session the phase 1 student should be able to demonstrate the origin of scalenus anterior correctly 15. At the end of session the phase 1 student should be able to demonstrate the insertion of scalenus anterior correctly 16. At the end of session the phase 1 student should be able to demonstrate the action of scalenus anterior correctly. 17. At the end of session the phase 1 student should be able to describe the origin of scalenus medius correctly 18. At the end of session the phase 1 student should be able to describe the insertion of scalenus medius correctly 19. At the end of session the phase 1 student should be able to explain the action of scalenus medius correctly. 20. At the end of session the phase 1 student should be able to identify the origin of scalenus medius correctly 21. At the end of session the phase 1 student should be able to identify the insertion of scalenus medius correctly 22. At the end of session the phase 1 student should be able to demonstrate the origin of scalenus medius correctly 23. At the end of session the phase 1 student should be able to demonstrate the insertion of scalenus medius correctly 24. At the end of session the phase 1 student should be able to demonstrate the action of scalenus medius correctly 25. At the end of session the phase 1 student should be able to describe the origin of levator scapulae correctly 26. At the end of session the phase 1 student should be able to describe the insertion of levator scapulae correctly 27. At the end of session the phase 1 student should be able to explain the action of levator scapulae correctly 28. At the end of session the phase 1 student should be able to identify the origin of levator scapulae correctly 29. At the end of session the phase 1 student should be able to identifythe								

	insertion of levator scapulae correctly 30. At the end of session the phase 1 student should be able to demonstrate the origin of levator scapulae correctly 31. At the end of session the phase 1 student should be able to demonstrate the insertion of levator scapulae correctly At the end of session the phase 1 student should be able to demonstrate the action of levator scapulae correctly.								
Topic:Cranialcavity		**Number ofcompetencies:(5)**			**Number of procedures for certification:(NIL)**				
AN30.1	**Describe the cranial fossae & identify related structures** **Objectives** 1. At the end of session the phase 1 student must be able to differentiate the cranial fossae accurately. 2.At the end of session the phase 1 student must be able to describe the cranial fossae accurately 3.At the end of session the phase 1 student must be able to identify the cranial fossae accurately 4.At the end of session the phase 1 student must be able to present the cranial fossae accurately 5.At the end of session the phase 1 student must be able to identify the structures related to cranial fossae accurately.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN30.2	**Describe & identify major foramina with structures passing through them** **Objectives** 1. At the end of session the phase 1 student must be able to describe the major foramina accurately. 2.At the end of session the phase 1 student must be able to discuss the structures passing through major foraminas accurately 3.At the end of session the phase 1 student must be able to identify the major foramina correctly 4.At the end of session the phase 1 student must be able to show the structures passing through major foraminas accurately.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN30.3	**Describe & identify dural folds & dural venous sinuses** **Objectives** 1. At the end of session the phase 1 student must be able to describe the dural folds accurately. 2.At the end of session the phase 1 student must be able to describe the intracranial venous sinuses accurately 3. At the end of session the phase 1 student must be able to discuss the applied anatomy of dural folds accurately. 4.At the end of session the phase 1 student must be able to discuss the applied anatomy of intracranial venous sinuses accurately 5. At the end of session the phase 1 student must be able to identify the location of dural folds accurately.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	6. At the end of session the phase 1 student must be able to identify the location of intracranial venous sinuses accurately. 7. At the end of session the phase 1 student must be able to present the location of dural folds accurately. 8..At the end of session the phase 1 student must be able to present the location of intracranial venous sinuses accurately								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN30.4	**Describe clinical importance of dural venous sinuses** **Objectives** 1. At the end of session the phase 1 student must be able to define the intracranial venous sinuses accurately. 2.At the end of session the phase 1 student must be able to describe clinical importance of dural venous sinuses accurately	K	KH	Y	Lecture	Written			
AN30.5	**Explain effect of pituitary tumours on visual pathway** **Objectives** 1. At the end of session the phase 1 student should be able to describe the visual pathway accurately. 2.At the end of session the phase 1 student should be able to explain effect of pituitary tumours on visual pathway accurately	K	KH	N	Lecture	Written		Ophthalmology	
Topic:Orbit		**Number ofcompetencies:(5)**				**Number of procedures for certification:(NIL)**			
AN31.1	**Describe & identify extra ocular muscles of eyeball** **Objectives** 1. At the end of session the phase 1 student must be able to describe the attachments of extra ocular muscles of eyeball accurately. 2. At the end of session the phase 1 student must be able to discuss the action of extra ocular muscles of eyeball accurately. 3. At the end of session the phase 1 student must be able to identify the attachments of extra ocular muscles of eyeball accurately. 4. At the end of session the phase 1 student must be able to demonstrate the action of extra ocular muscles of eyeball accurately.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN31.2	**Describe & demonstrate nerves and vessels in the orbit** **Objectives** 1. At the end of session the phase 1 student must be able to describe the nerves in the orbit correctely. 2. At the end of session the phase 1 student must be able to describe the vessels in the orbit correctly. 3. At the end of session the phase 1 student must be able to discuss the nerve palsy in the orbit correctely. 4. At the end of session the phase 1 student must be able to identify the	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	nerves in the orbit correctly 5. At the end of session the phase 1 student must be able to identify the vessels in the orbit correctly 6. At the end of session the phase 1 student must be able to demonstrate the course of nerves in the orbit correctly 7. At the end of session the phase 1 student must be able to demonstrate the course of vessels in the orbit correctly								
AN31.3	**Describe anatomical basis of Horner's syndrome** **Objectives** 1. At the end of session the phase 1 student should be able to define the Horner's syndrome accurately. 2. At the end of session the phase 1 student should be able to describe the signs of horner's syndrome correctly.	K	KH	N	Lecture	Written		Ophthalmology	
AN31.4	**Enumerate components of lacrimal apparatus** **Objectives** 1. At the end of session the phase 1 student must be able to Enumerate components of lacrimal apparatus accurately. 2. At the end of session the phase 1 student must be able to describe the passage of lachrymal fluid through lacrimal apparatus correctly.	K	KH	Y	Lecture	Written			
AN31.5	**Explain the anatomical basis of oculomotor, trochlear and abducent nerve palsies along with strabismus** **Objectives** 1. At the end of session the phase 1 student must be able to describe the course of occulomotor nerve correctly. 2. At the end of session the phase 1 student must be able to describe the course of trochlear nerve correctly. 3. At the end of session the phase 1 student must be able to describe the course of abducent nerve correctly. 4. At the end of session the phase 1 student must be able to describe the palsies of occulomotor nerve along with strabismus correctly. 5. At the end of session the phase 1 student must be able to describe the palsies of trochlear nerve along with strabismus correctly. 6. At the end of session the phase 1 student must be able to describe the palsies of abducent nerve along with strabismus correctly	K	KH	Y	Lecture	Written		Ophthalmology	
Topic:AnteriorTriangle		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			
AN32.1	**Describe boundaries and subdivisions of anterior triangle** **Objectives** 1. At the end of session the phase 1 student must be able to describe the boundaries of anterior triangle correctly 2. At the end of session the phase 1 student must be able to describe the subdivisions of anterior triangle correctly 3. At the end of session the phase 1 student must be able to describe the contents of anterior triangle correctly	K	KH	Y	Practical, Lecture	Written/ Viva voce			

AN32.2	**Describe & demonstrate boundaries and contents of muscular, carotid, digastric and submental triangles** **Objectives** 1. At the end of session the phase 1 student must be able to describe the boundaries of muscular triangle correctly 2. At the end of session the phase 1 student must be able to describe the boundaries of carotid triangle correctly 3. At the end of session the phase 1 student must be able to describe the boundaries of digastric triangle correctly 4. At the end of session the phase 1 student must be able to describe the boundaries of submental triangles correctly. 5. At the end of session the phase 1 student must be able to describe the contents of muscular triangle correctly 6.At the end of session the phase 1 student must be able to describe the contents of carotid triangle correctly 7.At the end of session the phase 1 student must be able to describe the contents of digastric triangle correctly 8.At the end of session the phase 1 student must be able to describe the contents of submental triangles correctly 9.At the end of session the phase 1 student must be able to perform under supervision the dissection of muscular triangle correctly 10.At the end of session the phase 1 student must be able to perform under supervision the dissection of carotid triangle correctly 11.At the end of session the phase 1 student must be able to perform under supervision the dissection of digastric triangle correctly 12.At the end of session the phase 1 student must be able to perform under supervision the dissection of submental triangles correctly 13.At the end of session the phase 1 student must be able to demonstrate the dissection of muscular triangle correctly 10.At the end of session the phase 1 student must be able to demonstrate the dissection of carotid triangle correctly 11.At the end of session the phase 1 student must be able demonstrate the dissection of digastric triangle correctly 12.At the end of session the phase 1 student must be able to demonstrate the dissection of submental triangles correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
Topic: Temporal andInfratemporalregions			**Number ofcompetencies:(5)**				**Number of procedures for certification:(NIL)**		
AN33.1	**Describe & demonstrate extent, boundaries and contents of temporal and infratemporal fossae** **Objectives** 1 At the end of session the phase 1 student must be able to discuss the extent of temporal fossa correctly 2. At the end of session the phase 1 student must be able to discuss the extent of infratemporal fossa correctly 3. At the end of session the phase 1 student must be able to describe the boundaries of temporal fossa correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	4. At the end of session the phase 1 student must be able to describe the boundaries of infratemporal fossa correctly 5.At the end of session the phase 1 student must be able to describe the contents of temporal fossa correctly 6. At the end of session the phase 1 student must be able to describe the contents of infratemporal fossa correctly 7.At the end of session the phase 1 student must be able to demonstrate the extent of temporal fossa correctly 8. At the end of session the phase 1 student must be able to demonstrate the extent of infratemporal fossa correctly 9.At the end of session the phase 1 student must be able to perform under supervision the dissection of boundaries of temporal fossa correctly 10. At the end of session the phase 1 student must be able to perform undersupervision the dissection of boundaries of infratemporal fossa correctly. 11. At the end of session the phase 1 student must be able to identify the contents of temporal fossa correctly 12. At the end of session the phase 1 student must be able to identify the contents of infratemporal fossa correctly 13. At the end of session the phase 1 student must be able to demonstrate the boundaries of temporal fossa correctly 14. At the end of session the phase 1 student must be able to demonstrate the boundaries of infratemporal fossa correctly 15.At the end of session the phase 1 student must be able to demonstrate the contents of temporal fossa correctly 16. At the end of session the phase 1 student must be able to demonstrate the contents of infratemporal fossa correctly								
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN33.2	**Describe & demonstrate attachments, direction of fibres, nerve supply and actions of muscles of mastication** **Objectives** 1. At the end of session the phase 1 student must be able to describe the origion of muscles of mastication correctly 2. At the end of session the phase 1 student must be able to describe the insertion of muscles of mastication correctly 3. At the end of session the phase 1 student must be able to discuss the direction of fibers of muscles of mastication correctly 4. At the end of session the phase 1 student must be able to describe the nerve supply of muscles of mastication correctly 5. At the end of session the phase 1 student must be able to discuss the action of muscles of mastication correctly 6. At the end of session the phase 1 student must be able to perform under supervision the dissection of attachments of muscles of	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	

	mastication correctly 7. At the end of session the phase 1 student must be able to analyze the direction of fibers of muscles of mastication correctly. 8. At the end of session the phase 1 student must be able to identify the nerve supply of muscles of mastication correctly 9. At the end of session the phase 1 student must be able to perform under supervision the action of muscles of mastication correctly 10. At the end of session the phase 1 student must be able to demonstrate muscles of mastication correctly 11. At the end of session the phase 1 student must be able to demonstrate the direction of fibers of muscles of mastication correctly. 12. At the end of session the phase 1 student must be able to demonstrate the nerve supply of muscles of mastication correctly 13. At the end of session the phase 1 student must be able to demonstrate the action of muscles of mastication correctly								
AN33.3	**Describe & demonstrate articulating surface, type & movements of temporomandibular joint** **Objectives** 1. At the end of session the phase 1 student must be able to discuss the articulating surface of temporomandibular joint accurately 2. At the end of session the phase 1 student must be able to describe the type of temporomandibular joint correctly 3. At the end of session the phase 1 student must be able to describe the movements of temporomandibular joint correctly 4. At the end of session the phase 1 student must be able to perform under supervision the dissection of temporomandibular joint correctly. 5. At the end of session the phase 1 student must be able to demonstrate the movements of temporomandibular joint correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN33.4	**Explain the clinical significance of pterygoid venous plexus** **Objectives** 1. At the end of session the phase 1 student must be able to describe the pterygoid venous plexus accurately 2. At the end of session the phase 1 student must be able to explain the clinical significance of pterygoid venous accurately.	K	KH	Y	Lecture	Written		General Surgery	
AN33.5	**Describe the features of dislocation of temporomandibular joint** **Objectives** 1. At the end of session the phase 1 student should be able to describe the features of temporomandinbular joint accurately 2. At the end of session the phase 1 student should be able to describe the features of dislocation of temporomandinbular joint accurately	K	KH	N	Lecture	Written		General Surgery	
Topic:Submandibularregion		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			

AN34.1	**Describe & demonstrate the morphology, relations and nerve supply of submandibular salivary gland & submandibular ganglion** **Objectives** 1. At the end of session the phase 1 student must be able to describe the morphology of submandibular gland accurately 2. At the end of session the phase 1 student must be able to describe the relations of submandibular gland accurately 3. At the end of session the phase 1 student must be able to describe the nerve supply of submandibular gland accurately 4. At the end of session the phase 1 student must be able to describe the morphology of submandibular ganglion accurately 5. At the end of session the phase 1 student must be able to describe the relations of submandibular ganglion accurately 6. At the end of session the phase 1 student must be able to describe the nerve supply of submandibular ganglion accurately 7. At the end of session the phase 1 student must be able to perform under supervision the dissection of submandibular gland accurately 8. At the end of session the phase 1 student must be able to perform under supervision the dissection of submandibular ganglion accurately 9. At the end of session the phase 1 student must be able to demonstrate the d submandibular gland accurately 10. At the end of session the phase 1 student must be able to demonstrate submandibular ganglion accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN34.2	**Describe the basis of formation of submandibular stones** **Objectives** 1. At the end of session the phase 1 student should be able to describe the basis of formation of submandibular stones 2. At the end of session the phase 1 student should be able to describe the applied anatomy of submandibular stones	K	KH	N	Lecture	Written		General Surgery	
Topic: Deep structures intheneck		**Number ofcompetencies:(10)**				**Number of procedures for certification:(NIL)**			
AN35.1	**Describe the parts, extent, attachments, modifications of deep cervical fascia** **Objectives** 1. At the end of session the phase 1 student must be able to describe the parts of deep cervical fascia 2. At the end of session the phase 1 student must be able to describe the extent of deep cervical fascia 3. At the end of session the phase 1 student must be able to describe the attachments of deep cervical fascia 4. At the end of session the phase 1 student must be able to describe the modifications of deep cervical fascia	K	KH	Y	Lecture	Written			

	5. At the end of session the phase 1 student must be able to describe the clinical significance of deep cervical fascia								
AN35.2	**Describe & demonstrate location, parts, borders, surfaces, relations & blood supply of thyroid gland** **Objectives** 1. At the end of session the phase 1 student must be able to describe the location of thyroid gland accurately 2. At the end of session the phase 1 student must be able to describe the parts of thyroid gland accurately 3. At the end of session the phase 1 student must be able to describe the borders of thyroid gland accurately 4. At the end of session the phase 1 student must be able to describe the surfaces of thyroid gland accurately 5. At the end of session the phase 1 student must be able to describe the relations of thyroid gland accurately 6. At the end of session the phase 1 student must be able to describe the blood supply of thyroid gland accurately 7. At the end of session the phase 1 student must be able to identify the location of thyroid gland accurately 8. At the end of session the phase 1 student must be able to identify the parts of thyroid gland accurately 9. At the end of session the phase 1 student must be able to identify the borders of thyroid gland accurately 10. At the end of session the phase 1 student must be able to identify the surfaces of thyroid gland accurately 11. At the end of session the phase 1 student must be able to identify the relations of thyroid gland accurately 12. At the end of session the phase 1 student must be able to identify the blood supply of thyroid gland accurately 13. At the end of session the phase 1 student must be able to demonstrate the parts of thyroid gland accurately 14. At the end of session the phase 1 student must be able to demonstrate the borders of thyroid gland accurately 15. At the end of session the phase 1 student must be able to demonstrate the surfaces of thyroid gland accurately 16. At the end of session the phase 1 student must be able to demonstrate the relations of thyroid gland accurately 17. At the end of session the phase 1 student must be able to demonstrate the blood supply of thyroid gland accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN35.3	**Demonstrate & describe the origin, parts, course & branches subclavian artery** **Objectives** 1. At the end of session the phase 1 student must be able to describe the origin of subclavian artery accurately 2. At the end of session the phase 1 student must be able to	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	describe the parts of subclavian artery accurately 3. At the end of session the phase 1 student must be able to describe the course of subclavian artery accurately 4. At the end of session the phase 1 student must be able to describe the branches of subclavian artery accurately 5. At the end of session the phase 1 student must be able to describe the applied anatomy of subclavian artery accurately 6. At the end of session the phase 1 student must be able to identify the origin of subclavian artery accurately 7. At the end of session the phase 1 student must be able to identify the parts of subclavian artery accurately 8. At the end of session the phase 1 student must be able to identify the course of subclavian artery accurately 9. At the end of session the phase 1 student must be able to identify the branches of subclavian artery accurately 10. At the end of session the phase 1 student must be able to demonstrate the origin of subclavian artery accurately 11. At the end of session the phase 1 student must be able to demonstrate the parts of subclavian artery accurately 12. At the end of session the phase 1 student must be able to demonstrate the course of subclavian artery accurately 13. At the end of session the phase 1 student must be able to demonstrate the branches of subclavian artery accurately								
AN35.4	**Describe & demonstrate origin, course, relations, tributaries and termination of internal jugular & brachiocephalic veins** **Objectives** 1. At the end of session the phase 1 student must be able to describe the origin of internal jugular vein accurately 2. At the end of session the phase 1 student must be able to describe the course of internal jugular vein accurately 3. At the end of session the phase 1 student must be able to describe the relations of internal jugular vein accurately 4. At the end of session the phase 1 student must be able to describe the tributaries of internal jugular vein accurately 5. At the end of session the phase 1 student must be able to describe the termination of internal jugular vein accurately 6. At the end of session the phase 1 student must be able to describe the origin of brachiocephalic veins accurately 7. At the end of session the phase 1 student must be able to describe the course of brachiocephalic veins accurately 8. At the end of session the phase 1 student must be able to describe the relations of brachiocephalic veins accurately 9. At the end of session the phase 1 student must be able to describe the tributaries of brachiocephalic veins accurately 10. At the end of session the phase 1 student must be able to describe the termination of brachiocephalic veins accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	11. At the end of session the phase 1 student must be able to identify the origin of internal jugular vein accurately 12. At the end of session the phase 1 student must be able to identify the course of internal jugular vein accurately 13. At the end of session the phase 1 student must be able to identify the relations of internal jugular vein accurately 14. At the end of session the phase 1 student must be able to identify the tributaries of internal jugular vein accurately 15. At the end of session the phase 1 student must be able to identify the termination of internal jugular vein accurately 16. At the end of session the phase 1 student must be able to identify the origin of brachiocephalic veins accurately 17. At the end of session the phase 1 student must be able to identify the course of brachiocephalic veins accurately 18. At the end of session the phase 1 student must be able to identify the relations of brachiocephalic veins accurately 19. At the end of session the phase 1 student must be able to identify the tributaries of brachiocephalic veins accurately 20. At the end of session the phase 1 student must be able to identify the termination of brachiocephalic veins accurately 21. At the end of session the phase 1 student must be able to demonstrate the origin of internal jugular vein accurately 22. At the end of session the phase 1 student must be able to demonstrate the course of internal jugular vein accurately 23. At the end of session the phase 1 student must be able to demonstrate the relations of internal jugular vein accurately 24. At the end of session the phase 1 student must be able to demonstrate the tributaries of internal jugular vein accurately 25. At the end of session the phase 1 student must be able to demonstrate the termination of internal jugular vein accurately 26. At the end of session the phase 1 student must be able to demonstrate the origin of brachiocephalic veins accurately 27. At the end of session the phase 1 student must be able to demonstrate the course of brachiocephalic veins accurately 28. At the end of session the phase 1 student must be able to demonstrate the relations of brachiocephalic veins accurately 29. At the end of session the phase 1 student must be able to demonstrate the tributaries of brachiocephalic veins accurately 30. At the end of session the phase 1 student must be able to demonstrate the termination of brachiocephalic veins accurately								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN35.5	**Describe and demonstrate extent, drainage & applied anatomy of cervical lymph nodes** **Objectives** 1.At the end of session the phase 1 student must be able to describe the extent of cervical lymph nodes accurately 2.At the end of session the phase 1 student must be able to describe the drainage of cervical lymph nodes accurately 3.At the end of session the phase 1 student must be able to describe the applied anatomy of cervical lymph nodes accurately 4.At the end of session the phase 1 student must be able to demonstrate the extent of cervical lymph nodes accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN35.6	**Describe and demonstrate the extent, formation, relation & branches of cervical sympathetic chain** **Objectives** 1.At the end of session the phase 1 student must be able to describe the extent of cervical sympathetic chain correctly 2.At the end of session the phase 1 student must be able to describe the formation of cervical sympathetic chain correctly 3.At the end of session the phase 1 student must be able to describe the relation of cervical sympathetic chain correctly 4.At the end of session the phase 1 student must be able to describe the branches of cervical sympathetic chain correctly 5.At the end of session the phase 1 student must be able to demonstrate the extent of cervical sympathetic chain correctly 6.At the end of session the phase 1 student must be able to demonstrate the formation of cervical sympathetic chain correctly 7.At the end of session the phase 1 student must be able to demonstrate the relation of cervical sympathetic chain correctly 8.At the end of session the phase 1 student must be able to demonstrate the branches of cervical sympathetic chain correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN35.7	**Describe the course and branches of IX, X, XI & XII nerve in the neck** **Objectives** 1.At the end of session the phase 1 student must be able to describe the course of IX cranial nerve in neck correctly 2.At the end of session the phase 1 student must be able to describe the course of X cranial nerve in neck correctly 3.At the end of session the phase 1 student must be able to describe the course of XI cranial nerve in neck correctly 4. At the end of session the phase 1 student must be able to describe the course of XII cranial nerve in neck correctly1. 5.At the end of session the phase 1 student must be able to demonstrate the branches of IX cranial nerve in neck correctly	K	KH	Y	Lecture	Written			

	6.At the end of session the phase 1 student must be able to demonstrate the branches of X cranial nerve in neck correctly 7.At the end of session the phase 1 student must be able to demonstrate the branches of XI cranial nerve in neck correctly 8.At the end of session the phase 1 student must be able to demonstrate the branches of XII cranial nerve in neck correctly. 9.At the end of session the phase 1 student must be able to analyze the applied anatomy of IX cranial nerve in neck correctly 10..At the end of session the phase 1 student must be able to of X cranial nerve in neck analyze the applied anatomy correctly 11.At the end of session the phase 1 student must be able to analyze the applied anatomy of XI cranial nerve in neck correctly 12.At the end of session the phase 1 student must be able to analyze the applied anatomy of XII cranial nerve in neck correctly								
AN35.8	**Describe the anatomically relevant clinical features of Thyroid swellings** **Objectives** 1.At the end of session the phase 1 student should be able to discuss the features of thyroid gland correctly 2.At the end of session the phase 1 student should be able to describe the anatomically relevant clinical features of Thyroid swellings correctly	K	KH	N	Lecture	Written		General Surgery	
AN35.9	**Describe the clinical features of compression of subclavian artery and lower trunk of brachial plexus by cervical rib** **Objectives** 1.At the end of session the phase 1 student should be able to discuss the course of subclavian artery accurately 2.At the end of session the phase 1 student should be able to describe the anatomy of lower trunk of brachial plexus correctly 3.At the end of session the phase 1 student should be able to describe the clinical features of compression of subclavian artery by cervical rib correctly 4.At the end of session the phase 1 student should be able to describe the clinical features of compression of lower trunk of brachial plexus by cervical rib correctly	K	KH	N	Lecture	Written		General Surgery	
AN35.10	**Describe the fascial spaces of neck** **Objectives** 1.At the end of session the phase 1 student should be able to describe the fascial spaces of neckaccurately 2.At the end of session the phase 1 student should be able to discuss clinical anatomy of the fascial spaces of neckaccurately	K	KH	N	Lecture	Written			
Topic: Mouth, Pharynx&Palate		**Number ofcompetencies:(5)**				**Number of procedures for certification:(NIL)**			
AN36.1	**Describe the 1) morphology, relations, blood supply and applied anatomy of palatine tonsil 2) composition of soft palate** **Objectives**	K	KH	Y	Lecture	Written		ENT	

	1. At the end of session the phase 1 student must be able to describe the morphologyof softpalateaccurately. 2. At the end of session the phase 1 student must be able to describe the relationsof softpalate accurately. 3. At the end of session the phase 1 student must be able to describe the blood supplyof softpalate accurately. 4. At the end of session the phase 1 student must be able to describe the applied anatomyof softpalate accurately. 5. At the end of session the phase 1 student must be able to describe the compositionof softpalateaccurately.								
AN36.2	**Describe the components and functions of Waldeyer's lymphatic ring** **Objectives** 1. At the end of session the phase 1 student must be able to describe the structure of Waldeyer's lymphatic ring accurately. 2.At the end of session the phase 1 student must be able to describe the functions of Waldeyer's lymphatic ring accurately. 3.At the end of session the phase 1 student must be able to describe the components of Waldeyer's lymphatic ring accurately	K	KH	Y	Lecture	Written		ENT	
AN36.3	**Describe the boundaries and clinical significance of pyriform fossa** **Objectives** 1. At the end of session the phase 1 student should be able to describe the location of pyriform fossa accurately 2. At the end of session the phase 1 student should be able to describe the boundaries of pyriform fossa accurately. 3. At the end of session the phase 1 student should be able to clinical significance the boundaries of pyriform fossa accurately	K	KH	N	Lecture	Written		ENT	
AN36.4	**Describe the anatomical basis of tonsillitis, tonsillectomy, adenoids and peri-tonsillar abscess** **Objectives** 1. At the end of session the phase 1 student should be able to describe the causes of tonsillitis accurately. 2. At the end of session the phase 1 student should be able to define the tonsillectomy accurately. 3. At the end of session the phase 1 student should be able to describe the causes of adenoids accurately. 4. At the end of session the phase 1 student should be able to describe the causes of peri-tonsillar abcess accurately. 5. At the end of session the phase 1 student should be able to describe the symptoms of tonsillitis accurately. 6. At the end of session the phase 1 student should be able to describe the anatomical basis of tonsillectomy accurately. 7. At the end of session the phase 1 student should be able to describe the symptoms of adenoids accurately. 8. At the end of session the phase 1 student should be able to describe the symptoms of peri-tonsillar abcess accurately.	K	KH	N	Lecture	Written		ENT	

AN36.5	**Describe the clinical significance of Killian's dehiscence** **Objectives** 1. At the end of session the phase 1 student should be able to define the boundaries Killian's dehiscence accurately. 2. At the end of session the phase 1 student should be able to describe the clinical significance of Killian's dehiscence accurately.	K	KH	N	Lecture	Written		ENT	
Topic: CavityofNose		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN37.1	**Describe & demonstrate features of nasal septum, lateral wall of nose, their blood supply and nerve supply** **Objectives** 1. At the end of session the phase 1 student must be able to describe the features of nasal septum accurately 2. At the end of session the phase 1 student must be able to describe the lateral wall of nose of accurately 3. At the end of session the phase 1 student must be able to describe the blood supply of nasal septum accurately 4. At the end of session the phase 1 student must be able to describe the nerve supply of nasal septum accurately 5. At the end of session the phase 1 student must be able to describe the deviation of nasal septum accurately. 6. At the end of session the phase 1 student must be able to describe the applied anatomy of lateral wall of nose of accurately 7. At the end of session the phase 1 student must be able to demonstrate the bony features of nasal septum accurately 8. At the end of session the phase 1 student must be able to demonstrate the bones of lateral wall of nose of accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		ENT	
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN37.2	**Describe location and functional anatomy of paranasal sinuses** **Objectives** 1. At the end of session the phase 1 student must be able to describe the location of paranasal sinuses accurately 2. At the end of session the phase 1 student must be able to describe the structure of paranasal sinuses accurately 3. At the end of session the phase 1 student must be able to describe the functional anatomy of paranasal sinuses accurately 4. At the end of session the phase 1 student must be able to enumerate the paranasal sinuses accurately	K	KH	Y	Lecture	Written		ENT	
AN37.3	**Describe anatomical basis of sinusitis & maxillary sinus tumours** **Objectives** 1. At the end of session the phase 1 student should be able to describe the symptoms of sinusitis accurately	K	KH	N	Lecture	Written		ENT	

	2. At the end of session the phase 1 student should be able to describe the symptoms of maxillary sinus tumours accurately 3. At the end of session the phase 1 student should be able to describe the causes of sinusitis accurately 4. At the end of session the phase 1 student should be able to describe the causes of maxillary sinus tumours accurately								
Topic:Larynx		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN38.1	**Describe the morphology, identify structure of the wall, nerve supply, blood supply and actions of intrinsic and extrinsic muscles of the larynx Objectives** 1. At the end of session the phase 1 student must be able to describe the morphology of intrinsic muscles of larynx accurately 2. At the end of session the phase 1 student must be able to describe the nerve supply of intrinsic muscles of larynx accurately 3. At the end of session the phase 1 student must be able to describe the blood supply of intrinsic muscles of larynx accurately 4. At the end of session the phase 1 student must be able to describe the actions of intrinsic muscles of larynx accurately 5. At the end of session the phase 1 student must be able to describe the morphology of extrinsic muscles of larynx accurately 6. At the end of session the phase 1 student must be able to describe the nerve supply of extrinsic muscles of larynx accurately 7. At the end of session the phase 1 student must be able to describe the blood supply of extrinsic muscles of larynx accurately 8. At the end of session the phase 1 student must be able to describe the actions of extrinsic muscles of larynx accurately 9. At the end of session the phase 1 student must be able to perform under supervision the dissection of intrinsic muscles of larynx accurately 10. At the end of session the phase 1 student must be able to perform under supervision the dissection of extrinsic muscles of larynx accurately 11. At the end of session the phase 1 student must be able to demonstrate the intrinsic muscles of larynx accurately 12. At the end of session the phase 1 student must be able to demonstrate the extrinsic muscles of larynx accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		ENT	
AN38.2	**Describe the anatomical aspects of laryngitis** **Objectives** 1. At the end of session the phase 1 student should be able to define the laryngitis accurately 2. At the end of session the phase 1 student should be able to define the clinical aspect of laryngitis accurately	K	KH	N	Lecture	Written		ENT	

AN38.3	**Describe anatomical basis of recurrent laryngeal nerve injury** **Objectives** 1. At the end of session the phase 1 student should be able to describe the anatomic landmarks in thyroid surgey accurately 2. At the end of session the phase 1 student should be able to describe the symptoms of recurrent laryngeal nerve injury accurately	K	KH	N	Lecture	Written		ENT	
Topic:Tongue		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			
AN39.1	**Describe & demonstrate the morphology, nerve supply, embryological basis of nerve supply, blood supply, lymphatic drainage and actions of extrinsic and intrinsic muscles of tongue** **Objectives** 1. At the end of session the phase 1 student must be able to describe the morphology of intrinsic muscles of tongue accurately 2. At the end of session the phase 1 student must be able to describe the nerve supply of intrinsic muscles of tongue accurately 3. At the end of session the phase 1 student must be able to describe the embryological basis of nerve supply of intrinsic muscles of tongue accurately 4. At the end of session the phase 1 student must be able to describe the blood supply of intrinsic muscles of tongue accurately 5. At the end of session the phase 1 student must be able to describe the lymphatic drainage of intrinsic muscles of tongue accurately 6. At the end of session the phase 1 student must be able to describe the action of intrinsic muscles of tongue accurately 7. At the end of session the phase 1 student must be able to describe the morphology of extrinsic muscles of tongue accurately 8. At the end of session the phase 1 student must be able to describe the nerve supply of extrinsic muscles of tongue accurately 9. At the end of session the phase 1 student must be able to describe the embryological basis of nerve supply of extrinsic muscles of tongue accurately 10. At the end of session the phase 1 student must be able to describe the blood supply of extrinsic muscles of tongue accurately 11. At the end of session the phase 1 student must be able to describe the lymphatic drainage of extrinsic muscles of tongue accurately 12. At the end of session the phase 1 student must be able to describe the action of extrinsic muscles of tongue accurately 13. At the end of session the phase 1 student must be able to identify intrinsic muscles of tongue accurately 14. At the end of session the phase 1 student must be able to identify the nerve supply of intrinsic muscles of tongue accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	15. At the end of session the phase 1 student must be able to present the embryological basis of nerve supply of intrinsic muscles of tongue accurately 16. At the end of session the phase 1 student must be able to show the blood supply of intrinsic muscles of tongue accurately 17. At the end of session the phase 1 student must be able to show the lymphatic drainage of intrinsic muscles of tongue accurately 18. At the end of session the phase 1 student must be able to demonstrate the action of intrinsic muscles of tongue accurately 19. At the end of session the phase 1 student must be able to identify extrinsic muscles of tongue accurately 20. At the end of session the phase 1 student must be able to identify the nerve supply of extrinsic muscles of tongue accurately 21. At the end of session the phase 1 student must be able to present the embryological basis of nerve supply of extrinsic muscles of tongue accurately 22. At the end of session the phase 1 student must be able to show the blood supply of extrinsic muscles of tongue accurately 23. At the end of session the phase 1 student must be able to show the lymphatic drainage of extrinsic muscles of tongue accurately 24. At the end of session the phase 1 student must be able to demonstrate the action of extrinsic muscles of tongue accurately								
AN39.2	**Explain the anatomical basis of hypoglossal nerve palsy** **Objectives** 1. At the end of session the phase 1 student should be able to describe the function of hypoglossal nerve accurately 2. At the end of session the phase 1 student should be able to describe the characteristic clinical manifestation of hypoglossal nerve palsy accurately	K	KH	N	Lecture	Written		ENT	
Topic: Organs of hearingandequilibrium		**Number ofcompetencies:(5)**				**Number of procedures for certification:(NIL)**			
AN40.1	**Describe & identify the parts, blood supply and nerve supply of external ear Objectives** 1. At the end of session the phase 1 student must be able to describe the parts of external ear accurately 2. At the end of session the phase 1 student must be able to describe the blood supply of external ear accurately 3. At the end of session the phase 1 student must be able to describe the nerve supply of external ear accurately 4. At the end of session the phase 1 student must be able to describe the applied anatomy of external ear accurately 5. At the end of session the phase 1 student must be able to describe	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		ENT	

	the nerve supply of external ear accurately 6. At the end of session the phase 1 student must be able to identify the position of external ear in cranial fossa accurately 7. At the end of session the phase 1 student must be able to demonstrate the parts of external ear accurately 8. At the end of session the phase 1 student must be able to demonstrate the blood supply of external ear accurately 9. At the end of session the phase 1 student must be able to demonstrate the nerve supply of external ear accurately								
AN40.2	**Describe & demonstrate the boundaries, contents, relations and functional anatomy of middle ear and auditory tube** **Objectives** 1. At the end of session the phase 1 student must be able to describe the boundaries of middle ear accurately 2. At the end of session the phase 1 student must be able to describe the contents of middle ear accurately 3. At the end of session the phase 1 student must be able to describe the relations of middle ear accurately 4. At the end of session the phase 1 student must be able to describe the functional anatomy of middle ear accurately 5. At the end of session the phase 1 student must be able to describe the boundaries of auditory tube accurately 6. At the end of session the phase 1 student must be able to describe the contents of auditory tube accurately 7. At the end of session the phase 1 student must be able to describe the relations of auditory tube accurately 8. At the end of session the phase 1 student must be able to describe the functional anatomy of auditory tube accurately 9. At the end of session the phase 1 student must be able to demonstrate the boundaries of middle ear accurately 10. At the end of session the phase 1 student must be able to demonstrate the contents of middle ear accurately 11. At the end of session the phase 1 student must be able to demonstrate the relations of middle ear accurately 12. At the end of session the phase 1 student must be able to identify the middle ear cavity in cranial fossa accurately 13. At the end of session the phase 1 student must be able to demonstrate the boundaries of auditory tube accurately 14. At the end of session the phase 1 student must be able to demonstrate the contents of auditory tube accurately 15. At the end of session the phase 1 student must be able to demonstrate the relations of auditory tube accurately	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		ENT	

AN40.3	**Describe the features of internal ear** **Objectives** 1. At the end of session the phase 1 student should be able to describe the features of internal ear accurately 2. At the end of session the phase 1 student should be able to describe the structure of internal ear accurately	K	KH	N	Lecture	Written		ENT	
AN40.4	**Explain anatomical basis of otitis externa and otitis media** **Objectives** 1. At the end of session the phase 1 student should be able to define theotitis externacorrectly. 2. At the end of session the phase 1 student should be able to define theotitis mediacorrectly 3. At the end of session the phase 1 student should be able to describe theapplied anatomyotitis externacorrectly. 4. At the end of session the phase 1 student should be able to describe the applied anatomy ofotitis mediacorrectly	K	KH	N	Lecture	Written		ENT	
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN40.5	**Explain anatomical basis of myringotomy** **Objectives** 1. At the end of session the phase 1 student should be able to define themyringotomycorrectly 2. At the end of session the phase 1 student should be able to explain anatomical basis of myringotomycorrectly	K	KH	N	Lecture	Written		ENT	
Topic:Eyeball		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN41.1	**Describe & demonstrate parts and layers of eyeball** **Objectives** 1. At the end of session the phase 1 student must be able to describe the part of eyeball correctly 2. At the end of session the phase 1 student must be able to describe the layers of eyeball correctly 3. At the end of session the phase 1 student must be able to describe the function of eyeball correctly 4. At the end of session the phase 1 student must be able to perform under supervision the dissection of eye ball the correctly 5. At the end of session the phase 1 student must be able to demonstrate the part of eye ball the correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		Ophthalmology	
AN41.2	**Describe the anatomical aspects of cataract, glaucoma & central retinal artery occlusion** **Objectives** 1. At the end of session the phase 1 student should be able to define	K	KH	N	Lecture	Written		Ophthalmology	

	thecataractcorrectly. 2. At the end of session the phase 1 student should be able to define theglaucomacorrectly 3. At the end of session the phase 1 student should be able to describe the anatomy of thecentral retinal arterycorrectly 4. At the end of session the phase 1 student should be able to describe the anatomical aspects of cataractcorrectly. 5. At the end of session the phase 1 student should be able to describe the anatomical aspects of glaucomacorrectly 6. At the end of session the phase 1 student should be able to describe the anatomical aspects of thecentral retinal artery occlusioncorrectly								
AN41.3	**Describe the position, nerve supply and actions of intraocular muscles Objectives** 1. At the end of session the phase 1 student should be able to describe the position of intraocular musclescorrectly. 2. At the end of session the phase 1 student should be able to describe the nerve supply of intraocular musclescorrectly 3. At the end of session the phase 1 student should be able to describe the actions of intraocular musclescorrectly 4. At the end of session the phase 1 student should be able to discuss the applied anatomy of intraocular musclescorrectly	K	KH	N	Lecture	Written		Ophthalmology	
Topic:BackRegion		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN42.1	**Describe the contents of the vertebral canal** **Objectives** 1. At the end of session the phase 1 student must be able to discuss the anatomy of the vertebral canalcorrectly 2. At the end of session the phase 1 student must be able to describe the contents of the vertebral canalcorrectly 3. At the end of session the phase 1 student must be able to identify the vertebracorrectly 4. At the end of session the phase 1 student must be able to demonstrate the contents of the vertebral canalcorrectly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN42.2	**Describe & demonstrate the boundaries and contents of Suboccipital triangle** **Objectives** 1. At the end of session the phase 1 student must be able to discuss the muscles of suboccipital trianglecorrectly 2. At the end of session the phase 1 student must be able to describe the boundaries of suboccipital trianglecorrectly 3. At the end of session the phase 1 student must be able to describe the contents of suboccipital trianglecorrectly 4. At the end of session the phase 1 student must be able to describe the clinical importance of suboccipital trianglecorrectly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	5. At the end of session the phase 1 student must be able to demonstrate the boundaries of suboccipital trianglecorrectly 6. At the end of session the phase 1 student must be able to demonstrate the contents of suboccipital trianglecorrectly 7. At the end of session the phase 1 student must be able to identify the muscles of suboccipital trianglecorrectly								
AN42.3	**Describe the position, direction of fibres, relations, nerve supply, actions of semispinalis capitis and splenius capitis** **Objectives** 1. At the end of session the phase 1 student should be able to describe the position of semispinalis capitiscorrectly. 2. At the end of session the phase 1 student should be able to describe the direction of fibres of semispinalis capitiscorrectly 3. At the end of session the phase 1 student should be able to describe the relations of semispinalis capitiscorrectly 4. At the end of session the phase 1 student should be able to describe the nerve supply of semispinalis capitiscorrectly 5. At the end of session the phase 1 student should be able to describe the action of semispinalis capitiscorrectly 6. At the end of session the phase 1 student should be able to describe the position of splenius capitis correctly. 7. At the end of session the phase 1 student should be able to describe the direction of fibres of splenius capitiscorrectly 8. At the end of session the phase 1 student should be able to describe the relations of splenius capitiscorrectly 9. At the end of session the phase 1 student should be able to describe the nerve supply of splenius capitiscorrectly 10. At the end of session the phase 1 student should be able to describe the action of splenius capitiscorrectly 11. At the end of session the phase 1 student should be able to discuss the applied anatomy of semispinalis capitiscorrectly. 12. At the end of session the phase 1 student should be able to describe the applied anatomy of splenius capitis correctly	K	KH	N	Lecture	Written			
Topic: Head & neck Joints, Histology, Development, Radiography &Surfacemarking		**Number ofcompetencies:(9)**			**Number of procedures for certification:(NIL)**				
AN43.1	**Describe & demonstrate the movements with muscles producing the movements of atlantooccipital joint & atlantoaxial joint** **Objectives** 1. At the end of session the phase 1 student must be able to discuss the muscles around atlantooccipital joint correctly 2. At the end of session the phase 1 student must be able to discuss the muscles around atlantoaxial joint correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	3. At the end of session the phase 1 student must be able to describe the action of the muscles around atlantooccipital joint correctly 4. At the end of session the phase 1 student must be able to describe the action of muscles around atlantoaxial joint correctly 5. At the end of session the phase 1 student must be able to identify the the bones forming atlantooccipital joint correctly 6. At the end of session the phase 1 student must be able to identify the the bones forming atlantoaxial joint correctly 7. At the end of session the phase 1 student must be able to demonstrate the movements of atlantoaxial joint correctly 8. At the end of session the phase 1 student must be able to demonstrate the movements of atlantooccipital joint correctly								
AN43.2	**Identify, describe and draw the microanatomy of pituitary gland, thyroid, parathyroid gland, tongue, salivary glands, tonsil, epiglottis, cornea, retina Objectives** 1. At the end of session the phase 1 student must be able to identify the pituitary gland with well labelled diagram correctly 2. At the end of session the phase 1 student must be able to describe the pituitary gland correctly 3. At the end of session the phase 1 student must be able to identify the thyroid with well labelled diagram correctly 4. At the end of session the phase 1 student must be able to describe the thyroid correctly 5. At the end of session the phase 1 student must be able to identify the parathyroid gland with well labelled diagram correctly 6. At the end of session the phase 1 student must be able to describe the parathyroid gland correctly 7. At the end of session the phase 1 student must be able to identify the tongue with well labelled diagram correctly 8. At the end of session the phase 1 student must be able to describe the tongue correctly 9. At the end of session the phase 1 student must be able to identify the salivary gland with well labelled diagram correctly 10. At the end of session the phase 1 student must be able to describe the salivary gland correctly 11. At the end of session the phase 1 student must be able to identify the tonsil with well labelled diagram correctly 12. At the end of session the phase 1 student must be able to describe the tonsil correctly 13. At the end of session the phase 1 student must be able to identify the epiglottis with well labelled diagram correctly 14. At the end of session the phase 1 student must be able to describe the epiglottis correctly 15. At the end of session the phase 1 student must be able to identify the cornea with well labelled diagram correctly 16. At the end of session the phase 1 student must be able to describe the	K/S	SH	Y	Lecture, Practical	Written/ skill assessment			

	cornea correctly 17. At the end of session the phase 1 student must be able to identify the retina with well labelled diagram correctly 18. At the end of session the phase 1 student must be able to describe the retina correctly.								
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN43.3	**Identify, describe and draw microanatomy of olfactory epithelium, eyelid, lip, sclero-corneal junction, optic nerve, cochlea- organ of corti, pineal gland** **Objectives** 1-At the end of the session the phase 1 student should be able to define epithelium correctly. 2- At the end of the session the phase 1 student should be able to descibe the Olfactory epithelium correctly 3-At the end of the session the phase 1 student should be able to describe the parts of Eyelid with Sclero-corneal junction correctly. 4-At the end of the session the phase 1 student should be able to describe the course of Optic nerve with its branches correctly. 5-At the end of the session the phase 1 student should be able to describe the anatomy of Cochlea with organ of corti correctly. 6-At the end of the session the phase 1 student should be able to describe the anatomy of Pineal gland correctly. 7-At the end of the session the phase 1 student should be able to identify the Sclero-cornial junctional correctly. 8- At the end of the session the phase 1 student should be able to draw the diagram of eyelid with Sclero-corneal junction correctly. 9- At the end of the session the phase 1 student should be able to draw the well labled diagram of chochlea- organ of corti accurately. 10- At the end of the session the phase 1 student should be able to identify the Pineal gland on the cadever correctly.	K/S	SH	N	Lecture, Practical	Written/ skill assessment			
AN43.4	**Describe the development and developmental basis of congenital anomalies of face, palate, tongue, branchial apparatus, pituitary gland, thyroid gland & eye** **Objectives** 1- At the end of the session the phase 1 student must be able to describe the development of face correctly. 2-- At the end of the session the phase 1 student must be able to describe the development of palate correctly. 3-- At the end of the session the phase 1 student must be able to describe the development of tongue correctly. 4-- At the end of the session the phase 1 student must be able to describe the development of branchial apparatus correctly.	K	KH	Y	Lecture	Written/ Viva voce			

	5-- At the end of the session the phase 1 student must be able to describe the development of pituitary gland correctly. 6-- At the end of the session the phase 1 student must be able to describe the development of thyroid gland correctly. 7-- At the end of the session the phase 1 student must be able to describe the development of eye correctly. 8-- At the end of the session the phase 1 student must be able to describe the congenital anomalies of face correctly. 10- At the end of the session the phase 1 student must be able to describe the congenital anomalies of palate correctly. 11- At the end of the session the phase 1 student must be able to describe the congenital anomalies of tongue correctly. 12- At the end of the session the phase 1 student must be able to describe the congenital anomalies of branchial apparatus correctly 13- At the end of the session the phase 1 student must be able to describe the congenital anomalies of pituitary gland correctly. 14-At the end of the session the phase 1 student must be able to describe the congenital anomalies of thyroid gland correctly. 15- At the end of the session the phase 1 student must be able to describe the congenital anomalies of eye correctly.								
AN43.5	**Demonstrate- 1) Testing of muscles of facial expression, extraocular muscles, muscles of mastication, 2) Palpation of carotid arteries, facial artery, superficial temporal artery, 3) Location of internal and external jugular veins, 4) Location of hyoid bone, thyroid cartilage and cricoid cartilage with their vertebral levels.** **Objectives** 1- At the end of the session the phase 1 student must be able to demonstrate muscles of facial expression correctly. 2- At the end of the session the phase 1 student must be able to demonstrate extraocular muscles correctly. 3- At the end of the session the phase 1 student must be able to demonstrate muscles of mastication correctly.. 4-. At the end of the session the phase 1 student must be able to palpate carotid arteries correctly 5- At the end of the session the phase 1 student must be able to palpate facial artery correctly 6- At the end of the session the phase 1 student must be able to palpate superficial temporal artery correctly. 7- At the end of the session the phase 1 student must be able to locate external jugular vein correctly. 8- At the end of the session the phase 1 student must be able to locate internal jugular vein correctly. 9- At the end of the session the phase 1 student must be able to locate	K/S	SH	Y	Practical	Viva voce/ skill assessment		General Surgery	

	Hyoid bone with their vertebral level correctly 10- At the end of the session the phase 1 student must be able to locate thyroid cartilage with their vertebral level correctly 11- At the end of the session the phase 1 student must be able to locate cricoid cartilage with their vertebral level correctly								
AN43.6	**Demonstrate surface projection of- Thyroid gland, Parotid gland and duct, Pterion, Common carotid artery, Internal jugular vein, Subclavian vein, External jugular vein, Facial artery in the face & accessory nerve** **Objectives** 1- At the end of the session the phase 1 student should be able to demonstrate surface projection of thyroid gland with duct correctly. 2- - At the end of the session the phase 1 studentshould be able to demonstrate surface projection of parotid gland with duct correctly. 3-- At the end of the session the phase 1 studentshould be able to demonstrate surface anatomy of common carotid artery correctly. 4-- At the end of the session the phase 1 student should be able to demonstrate surface anatomy of internal jugular vein correctly. 5-- At the end of the session the phase 1 student should be able to demonstrate surface anatomy of sub clavian vein correctly. 6-- At the end of the session the phase 1 student should be able to demonstrate surface anatomy of external jugular vein correctly. 7-- At the end of the session the phase 1 student should be able to demonstrate surface anatomy of facial artery in the face correctly. 8-- At the end of the session the phase 1 student should be able to demonstrate surface anatomy of accessory nerve correctly	K/S	SH	N	Practical	Viva voce/ skill assessment		General Surgery	
AN43.7	**Identify the anatomical structures in 1) Plain x-ray skull, 2) AP view and lateral view 3) Plain x-ray cervical spine-AP and lateral view 4) Plain x- ray of paranasal sinuses** **Objectives** 1- At the end of the session the phase 1 student must be able to describe plain x-ray skull correctly 2- At the end of the session the phase 1 student must be able to describe AP view of plain x-ray correctly 3- At the end of the session the phase 1 student must be able to describe lateral view of plain x-ray correctly 4- At the end of the session the phase 1 student must be able to describe plain x-ray of AP view of cervical spine correctly 5- At the end of the session the phase 1 student must be able to describe plain x-ray of lateral view of plain x-ray correctly 6- At the end of the session the phase 1 student must be able to describe PNS view of plain x-ray correctly 7- At the end of the session the phase 1 student must be able to identify	K/S	SH	Y	Practical	Viva voce/ skill assessment		Radiodiagnosis	

	plain x-ray skull correctly 8- At the end of the session the phase 1 student must be able to identify AP view of plain x-ray correctly 9- At the end of the session the phase 1 student must be able to identify lateral view of plain x-ray correctly 10- At the end of the session the phase 1 student must be able to identify plain x-ray of AP view of cervical spine correctly 11- At the end of the session the phase 1 student must be able to identify plain x-ray of lateral view of plain x-ray correctly 12- At the end of the session the phase 1 student must be able to identify PNS view of plain x-ray correctly 13-At the end of the session the phase 1 student must be able to present plain x-ray skull correctly 14- At the end of the session the phase 1 student must be able to present AP view of plain x-ray correctly 15- At the end of the session the phase 1 student must be able to present lateral view of plain x-ray correctly 16- At the end of the session the phase 1 student must be able to present plain x-ray of AP view of cervical spine correctly 17- At the end of the session the phase 1 student must be able to present plain x-ray of lateral view of plain x-ray correctly 18- At the end of the session the phase 1 student must be able to present PNS view of plain x-ray correctly								
AN43.8	**Describe the anatomical route used for carotid angiogram and vertebral angiogram** **Objectives** 1-- At the end of the session the phase 1 student should be able to describe anatomical route of carotid angiogram correctly 2-- At the end of the session the phase 1 student should be able to describe anatomical route of vertebral angiogram correctly 3-- At the end of the session the phase 1 student should be able to identify anatomical route of carotid angiogram correctly 4-- At the end of the session the phase 1 student should be able to identify anatomical route of vertebral angiogram correctly 5-- At the end of the session the phase 1 student should be able to present anatomical route of carotid angiogram correctly 6-- At the end of the session the phase 1 student should be able to present anatomical route of vertebral angiogram correctly	K/S	SH	N	Practical	Viva voce/ skill assessment		Radiodiagnosis	
AN43.9	**Identify anatomical structures in carotid angiogram and vertebral angiogram** **Objectives** 1-- At the end of the session the phase 1 student should be able to describe anatomical structures in carotid angiogram correctly	K/S	SH	N	Practical	Viva voce/ skill assessment		Radiodiagnosis	

	2-- At the end of the session the phase 1 student should be able to describe anatomical structures in vertebral angiogram correctly 3-- At the end of the session the phase 1 student should be able to identify anatomical structures in carotid angiogram correctly 4-- At the end of the session the phase 1 student should be able to identify anatomical structures in vertebral angiogram correctly 5-- At the end of the session the phase 1 student should be able to present anatomical structures in carotid angiogram correctly 6-- At the end of the session the phase 1 student should be able to present anatomical structures in vertebral angiogram correctly								
Topic: Anteriorabdominalwall		**Number ofcompetencies:(7)**				**Number of procedures for certification:(NIL)**			
AN44.1	**Describe & demonstrate the Planes (transpyloric, transtubercular, subcostal, lateral vertical, linea alba, linea semilunaris), regions & Quadrants of abdomen** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the transpyloric plane correctly 2-At the end of the session the phase 1 student must be able to describe the transtubercular plane correctly 3-At the end of the session the phase 1 student must be able to describe the subcostal plane correctly 4-At the end of the session the phase 1 student must be able to describe the lateral vertical plane correctly 5-At the end of the session the phase 1 student must be able to describe the attachment of linea alba correctly 6-At the end of the session the phase 1 student must be able to describe the extent of linea semilunaris correctly 7-At the end of the session the phase 1 student must be able to describe the anatomical regions correctly 8- At the end of the session the phase 1 student must be able to describe the Quadrants of abdomen correctly 9-At the end of the session the phase 1 student must be able to demonstrate the transpyloric plane correctly 10-At the end of the session the phase 1 student must be able to demonstrate the transtubercular plane correctly 11-At the end of the session the phase 1 student must be able to demonstrate the subcostal plane correctly 12-At the end of the session the phase 1 student must be able to demontrate the lateral vertical plane correctly 13-At the end of the session the phase 1 student must be able to demonstrate the attachment of linea alba correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written/ Viva voce/ skill assessment		General Surgery	

	14-At the end of the session the phase 1 student must be able to identify the extent of linea semilunaris correctly 15-At the end of the session the phase 1 student must be able to demonstrate the anatomical regions correctly 16-At the end of the session the phase 1 student must be able to demonstrate the Quadrants of abdomen correctly								
AN44.2	**Describe & identify the Fascia, nerves & blood vessels of anterior abdominal wall** **Objectives** 1- At the end of the session the phase 1 student must be able to describe the Fascia of anterior abdominal wall correctly 2- At the end of the session the phase 1 student must be able to describe the nerves of anterior abdominal wall correctly 3- At the end of the session the phase 1 student must be able to describe the blood vessels of anterior abdominal wall correctly 4- At the end of the session the phase 1 student must be able to identify the Fascia correctly 5- At the end of the session the phase 1 student must be able to identify the nerves 0f anterior abdominal wall correctly 6- At the end of the session the phase 1 student must be able to identify the blood vessels 0f anterior abdominal wall correctly 7- At the end of the session the phase 1 student must be able to demontrate the Fascia of anterior abdominal wall correctly 8- At the end of the session the phase 1 student must be able to demonstrate the nerves of anterior abdominal wall correctly 9- At the end of the session the phase 1 student must be able to demonstrate blood vessels of anterior abdominal wall correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN44.3	**Describe the formation of rectus sheath and its contents** **Objectives** 1- At the end of the session the phase 1 student must be able to describe the formation of rectus sheath correctly 2- At the end of the session the phase 1 student must be able to describe the content of rectus sheath correctly 3- At the end of the session the phase 1 student must be able to identify the extent of rectus sheath correctly 4- At the end of the session the phase 1 student must be able to demonstrate the contents of rectus sheath correctly	K	KH	Y	Lecture	Written/ Viva voce			

AN44.4	***Describe & demonstrate extent, boundaries, contents of Inguinal canal including Hesselbach's triangle.*** ***Objectives*** 1- At the end of the session the phase 1 student must be able to describe extent of Inguinal canal correctly 2- At the end of the session the phase 1 student must be able to describe boundaries of Inguinal canal correctly 3- At the end of the session the phase 1 student must be able to describe contents of Inguinal canal correctly 4- At the end of the session the phase 1 student must be able to describe boundaries of Hesselbach's triangle correctly 5-- At the end of the session the phase 1 student must be able to describe contents of Hesselbach's triangle correctly 6- At the end of the session the phase 1 student must be able to identify the extent of Inguinal canal correctly 7- At the end of the session the phase 1 student must be able to demonstrate boundaries of Inguinal canal correctly 8- At the end of the session the phase 1 student must be able to identify the contents of Inguinal canal correctly 9- At the end of the session the phase 1 student must be able to identify the boundaries of Hesselbach's triangle correctly 10-- At the end of the session the phase 1 student must be able to demonstrate the contents of Hesselbach's triangle correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN44.5	**Explain the anatomical basis of inguinal hernia.** **Objectives** 1- At the end of the session the phase 1 student must be able to define the inguinal hernia accurately 2-- At the end of the session the phase 1 student must be able to describe the inguinal hernia correctly 3-- At the end of the session the phase 1 student must be able to diffentiate the inguinal hernia with other hernia correctly 4-- At the end of the session the phase 1 student must be able to identify the inguinal hernia correctly	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN44.6	**Describe & demonstrate attachments of muscles of anterior abdominal wall Mention the major subgroups of back muscles, nerve supply and action** **Objectives** 1- At the end of the session the phase 1 student must be able to describe the attachments of muscles of anterior abdominal wall correctly 2- At the end of the session the phase 1 student must be able to enumerate the major subgroups of back muscles correctly 3- At the end of the session the phase 1 student must be able to describe the nerve supply of muscles of anterior abdominal wall correctly 4- At the end of the session the phase 1 student must be able to identify the attachments of muscles of anterior abdominal wall correctly 5- At the end of the session the phase 1 student must be able to identify	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	

	the major subgroups of back muscles correctly 6-At the end of the session the phase 1 student must be able to identify the nerve supply of muscles of anterior abdominal wall correctly 7- At the end of the session the phase 1 student must be able to demonstrate the action of muscles of anterior abdominal wall correctly								
AN44.7	**Enumerate common Abdominal incisions** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the common Abdominal incisions correctly 2-At the end of the session the phase 1 student should be able to differentiate the common Abdominal incisions correctly 3-At the end of the session the phase 1 student should be able to identify the common Abdominal incisions correctly 4- At the end of the session the phase 1 student should be able to present the common Abdominal incisions correctly	K	KH	N	Lecture	Written		General Surgery	
Topic: Posteriorabdominalwall		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN45.1	**Describe Thoracolumbar fascia** **Objectives** 1-At the end of the session the phase 1 student must be able to describe Thoracolumbar fascia correctly 2- At the end of the session the phase 1 student must be able to demonstrate the extent of thoracolumbar fascia correcty	K	KH	Y	Lecture	Written			
AN45.2	**Describe & demonstrate Lumbar plexus for its root value, formation & branches** **Objectives** 1-At the end of the session the phase 1 student must be able to describe lumbar plexus correctly 2-At the end of the session the phase 1 student must be able to describe formation of lumber plexus with its root value correctly 3-At the end of the session the phase 1 student must be able to describe branches of lumber plexus correctly 4-At the end of the session the phase 1 student must be able to enumerate branches of lumber plexus correctly 5- At the end of the session the phase 1 student must be able to demonstrate branches of lumber plexus correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN45.3	**Mention the major subgroups of back muscles, nerve supply, and action** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the major subgroups of back muscles, correctly 2-At the end of the session the phase 1 student should be able to describe the nerve supply of major subgroups of back muscles correctly 3-At the end of the session the phase 1 student should be able to describe action ofthe major subgroups of back muscles correctly	K	KH	N	Lecture	Written			

Topic: Maleexternalgenitalia		Number ofcompetencies:(5)			Number of procedures for certification:(NIL)				
AN46.1	**Describe & demonstrate coverings, internal structure, side determination, blood supply, nerve supply, lymphatic drainage & descent of testis with its applied anatomy-** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the coverings of testis correctly 2--At the end of the session the phase 1 student must be able to describe internal structure of testis correctly 3--At the end of the session the phase 1 student must be able to describe the side determination of testis correctly 4--At the end of the session the phase 1 student must be able to describe blood supply of testis correctly 5--At the end of the session the phase 1 student must be able to describe nerve supply of testis correctly 6--At the end of the session the phase 1 student must be able to describe lymphatic drainage of testis correctly 7--At the end of the session the phase 1 student must be able to describe descent of testis with its applied anatomy- correctly 8--At the end of the session the phase 1 student must be able to demonstrate descent of testis with its applied anatomy correctly 9--At the end of the session the phase 1 student must be able to demostrate internal structure of testis correctly 10--At the end of the session the phase 1 student must be able to identify the blood supply of testis correctly 11--At the end of the session the phase 1 student must be able to demonstrate nerve supply of testis correctly 12--At the end of the session the phase 1 student must be able to identify lymphatic drainage of testis correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN46.2	**Describe parts of Epididymis** **Objectives** 1- At the end of the session the phase 1 student must be able to describe the gross anatomy of Epididymis correctly 2- At the end of the session the phase 1 student must be able to demonstrate parts of Epididymis correctly	K	KH	Y	Lecture, Practical	Written/ Viva voce			
AN46.3	**Describe Penis under following headings: (parts, components, blood supply and lymphatic drainage)** **Objectives** 1-At the end of the session the phase 1 student must be able to describe parts of Penis correctly 2-At the end of the session the phase 1 student must be able to describe components of penis correctly	K	KH	Y	Lecture, Practical	Written/ Viva voce			

	3- At the end of the session the phase 1 student must be able to describe blood supply of penis correctly 4- At the end of the session the phase 1 student must be able to identify lymphatic drainage of penis correctly								
AN46.4	**Explain the anatomical basis of Varicocoele** **Objectives** 1-At the end of the session the phase 1 student should be able to define Varicocoele accuratly 2-At the end of the session the phase 1 student should be able to describe Varicocoele with its applied aspect correctly	K	KH	N	Lecture	Written		General Surgery	

Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN46.5	**Explain the anatomical basis of Phimosis & Circumcision** **Objectives** 1-At the end of the session the phase 1 student should be able to Explain the anatomical basis of Phimosis correctly 2- At the end of the session the phase 1 student should be able to define Circumcision correctly 3- At the end of the session the phase 1 student should be able to describe Circumcision correctly	K	KH	N	Lecture	Written		General Surgery	
Topic:Abdominalcavity		**Number ofcompetencies:(14)**				**Number of procedures for certification:(NIL)**			
AN47.1	**Describe & identify boundaries and recesses of Lesser & Greater sac** **Objectives** 1-At the end of the session the phase 1 student must be able to describe boundaries of greater sac correctly 2-At the end of the session the phase 1 student must be able to describe boundaries of lesser sac correctly 3-At the end of the session the phase 1 student must be able to describe recesses of Lesser sac correctly 4=At the end of the session the phase 1 student must be able to describe recesses of Greater sac correctly 5-At the end of the session the phase 1 student must be able to identify the recesses of Lesser sac correctly 6-At the end of the session the phase 1 student must be able to identify the recesses of Greater sac correctly 7-At the end of the session the phase 1 student must be able to demonstrate lesser sac correctly 8-At the end of the session the phase 1 student must be able to demonstrate greater sac correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	

AN47.2	**Name & identify various peritoneal folds & pouches with its explanation** **Objectives** 1- At the end of the session the phase 1 student must be able to enumerate various peritoneal folds correctly 2- At the end of the session the phase 1 student must be able to enumerate peritoneal pouches correctly 3- At the end of the session the phase 1 student must be able to describe various peritoneal folds correctly 4- At the end of the session the phase 1 student must be able to describe various peritoneal pouches correctly 5- At the end of the session the phase 1 student must be able to identify various peritoneal folds correctly 6- At the end of the session the phase 1 student must be able to identify various peritoneal poches correctly 7- At the end of the session the phase 1 student must be able to demonstrate various peritoneal folds correctly 8- At the end of the session the phase 1 student must be able to demonstrate various peritoneal pouches correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN47.3	**Explain anatomical basis of Ascites & Peritonitis** **Objectives** 1- At the end of the session the phase 1 student should be able to explain ascites correctly 2- At the end of the session the phase 1 student should be able to explain peritonitis correctly 3- At the end of the session the phase 1 student should be able to identify ascitis correctly 4- At the end of the session the phase 1 student should be able to identify peritonitis correctly	K	KH	N	Lecture	Written		General Surgery	
AN47.4	**Explain anatomical basis of Subphrenic abscess** **Objectives** 1-At the end of the session the phase 1 student should be able to explain anatomy of subphrenic abscess correctly 2-At the end of the session the phase 1 student should be able to identify the subphrenic abscess correctly	K	KH	N	Lecture	Written		General Surgery	
AN47.5	**Describe & demonstrate major viscera of abdomen under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects)** **Objectives** 1-At the end of the session the phase 1 student must be able to describe anatomical position of major viscera of abdomen correctly 2-At the end of the session the phase 1 student must be able to describe external and internal features of major viscera of abdomen correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	

	3-At the end of the session the phase 1 student must be able to describe important peritoneal and other relations of major viscera of abdomen correctly 4-At the end of the session the phase 1 student must be able to describe blood supply of major viscera of abdomen correctly 5-At the end of the session the phase 1 student must be able to describe nerve supply of major viscera of abdomen correctly 6-At the end of the session the phase 1 student must be able to describe lymphatic drainage of major viscera of abdomen correctly 7-At the end of the session the phase 1 student must be able to describe applied anatomy of major viscera of abdomen correctly 8-At the end of the session the phase 1 student must be able to demonstrate anatomical position of major viscera of abdomen correctly 9-At the end of the session the phase 1 student must be able to demonstrate external and internal features of major viscera of abdomen correctly 10-At the end of the session the phase 1 student must be able to identify important peritoneal and other relations of major viscera of abdomen correctly 11-At the end of the session the phase 1 student must be able to identify blood supply of major viscera of abdomen correctly 12-At the end of the session the phase 1 student must be able to demonstrate nerve supply of major viscera of abdomen 13-At the end of the session the phase 1 student must be able to identify the major viscera of abdomen correctly 14-At the end of the session the phase 1 student must be able to present the applied anatomy of major viscera of abdomen correctly								
AN47.6	**Explain the anatomical basis of Splenic notch, Accessory spleens, Kehr's sign, Different types of vagotomy, Liver biopsy (site of needle puncture), Referred pain in cholecystitis, Obstructive jaundice, Referred pain around umbilicus, Radiating pain of kidney to groin & Lymphatic spread in carcinoma stomach** **Objectives** 1- At the end of the session the phase 1 student should be able to Explain the anatomical basis of Splenic notch,correctly- 2- At the end of the session the phase 1 student should be able to Explain the anatomical basis of Accessory spleens correctly- 3- At the end of the session the phase 1 student should be able to Explain the anatomical basis of defferent types of vagotomy correctly- 4- At the end of the session the phase 1 student should be able to Explain the anatomical basis of Liver biopsy (site of needle puncture) correctly-	K	KH	N	Lecture	Written		General Surgery	

	5- At the end of the session the phase 1 student should be able to Explain the anatomical basis of Referred pain in cholecystitis correctly- 6- At the end of the session the phase 1 student should be able to Explain the anatomical basis of Obstructive jaundice correctly- 7- At the end of the session the phase 1 student should be able to Explain the anatomical basis of Referred pain around umbilicus correctly –- 8- At the end of the session the phase 1 student should be able to Explain the anatomical basis of Radiating pain of kidney to groin correctly 9- At the end of the session the phase 1 student should be able to Explain the anatomical basis of lymphatic spread in carcinoma stomach correctly								
AN47.7	**Mention the clinical importance of Calot's triangle** **Objectives** 1-At the end of the session the phase 1 student should be able to describe Calot's triangle correctly 2-At the end of the session the phase 1 student should be able to mention the clinical importance of Calot's triangle correctly	K	KH	N	Lecture	Written		General Surgery	
AN47.8	**Describe & identify the formation, course relations and tributaries of Portal vein, Inferior vena cava & Renal vein** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the formation of portal vein correctly 2-At the end of the session the phase 1 student must be able to describe the formation of Inferior vena cava correctly 3-At the end of the session the phase 1 student must be able to describe the formationof Renal vein correctly 4- At the end of the session the phase 1 student must be able to identify the formation of Portal vein correctly 5-At the end of the session the phase 1 student must be able to identify the formation of Inferior vena cava correctly 6-At the end of the session the phase 1 student must be able to identify the formation of Renal vein correctly 7- At the end of the session the phase 1 student must be able to describe course with tributaries of Portal vein correctly 8-At the end of the session the phase 1 student must be able to describe course with tributaries of Inferior vena cava correctly 9- At the end of the session the phase 1 student must be able to describe course with tributaries of Renal vein correctly 10- At the end of the session the phase 1 student must be able to identify the relations of Portal vein correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	11- At the end of the session the phase 1 student must be able to identify the relations of Inferior vena cava correctly 12- At the end of the session the phase 1 student must be able to identify the relations of Renal vein correctly								
AN47.9	**Describe & identify the origin, course, important relations and branches of Abdominal aorta, Coeliac trunk, Superior mesenteric, Inferior mesenteric & Common iliac artery** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the origin of Abdominal aorta correctly 2-At the end of the session the phase 1 student must be able to describe the origin of coeliac trunk correctly 3-At the end of the session the phase 1 student must be able to describe the origin of superior mesenteric artery correctly 4-At the end of the session the phase 1 student must be able to describe the origin of inferior mesenteric artery correctly 5-At the end of the session the phase 1 student must be able to describe the origin of common iliac artery correctly 6-At the end of the session the phase 1 student must be able to identify the course of Abdominal aorta correctly 7-At the end of the session the phase 1 student must be able to identify the course of coeliac trunk correctly 8-At the end of the session the phase 1 student must be able to identify the course of superior mesenteric artery correctly 9-At the end of the session the phase 1 student must be able to identify the course of inferior mesenteric artery correctly 10-At the end of the session the phase 1 student must be able to identify the course of common iliac artery correctly 11-At the end of the session the phase 1 student must be able to discuss important relations with branches of abdominal aorta correctly 12-At the end of the session the phase 1 student must be able to discuss important relations with branches of Coeliac trunk correctly 13-At the end of the session the phase 1 student must be able to discuss important relations with branches of Superior mesenteric artery correctly 14-At the end of the session the phase 1 student must be able to discuss important relations with branches of inferior mesenteric artery correctly 15- At the end of the session the phase 1 student must be able to discuss important relations with branches of coeliac trunk correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**

AN47.10	**Enumerate the sites of portosystemic anastomosis-** **Objectives** 1- At the end of the session the phase 1 student must be able to enumerate the sites of portosystemic anastomosis correctly 2-At the end of the session the phase 1 student must be able to identify the sites of portosystemic anastomosis correctly	K	KH	Y	Lecture	Written		General Surgery	
AN47.11	**Explain the anatomic basis of hematemesis& caput medusae in portal hypertension** **Objectives** 1-At the end of the session the phase 1 student must be able to explain the anatomic basis of hematemesis in portal hypertension correctly 2-At the end of the session the phase 1 student must be able to explain the anatomic basis of caput medusae in portal hypertension correctly	K	KH	Y	Lecture,	Written/ Viva voce		General Surgery	
AN47.12	**describe important nerve plexuses of posterior abdominal wall** **Objectives** 1- At the end of the session the phase 1 student should be able to describe important nerve plexuses of posterior abdominal wallcorrectly - 2- At the end of the session the phase 1 student should be able to identify important nerve plexuses of posterior abdominal wallcorrectly	K	KH	N	Lecture	Written			
AN47.13	**Describe & demonstrate the attachments, openings, nerve supply & action of the thoracoabdominal diaphragm -** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the attachment of the thoracoabdominal diaphragm correctly 2-At the end of the session the phase 1 student must be able to describe openings of the thoracoabdominal diaphragm correctly - 3- At the end of the session the phase 1 student must be able to describe the nerve supply of the thoracoabdominal diaphragm correctly 4-At the end of the session the phase 1 student must be able to describe the action of the thoracoabdominal diaphragm correctly 5-At the end of the session the phase 1 student must be able to demonstrate the attachment of the thoracoabdominal diaphragm correctly 6-At the end of the session the phase 1 student must be able to demonstrate openings of the thoracoabdominal diaphragm correctly 7- At the end of the session the phase 1 student must be able to demonstrate the nerve supply of the thoracoabdominal diaphragm correctly 8-At the end of the session the phase 1 student must be able to demonstrate the action of the thoracoabdominal diaphragm correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

AN47.14	**Describe the abnormal openings of thoracoabdominal diaphragm and diaphragmatic hernia** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the abnormal openings of thoracoabdominal diaphragm correctly 2-At the end of the session the phase 1 student should be able to describe the diaphragmatic hernia correctly	K	KH	N	Lecture	Written		General Surgery	
Topic: Pelvic wallandviscera		**Number ofcompetencies:(8)**				**Number of procedures for certification:(NIL)**			
AN48.1	**Describe & identify the muscles of Pelvic diaphragm** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the muscles of Pelvic diaphragm correctly 2-At the end of the session the phase 1 student must be able to discuss the muscles of Pelvic diaphragm correctly 3-At the end of the session the phase 1 student must be able to identify the muscles of Pelvic diaphragm correctly 4-At the end of the session the phase 1 student must be able to demonstrate the muscles of Pe At the end of the session the phase 1 student must be able to correctly lvic diaphragm correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN48.2	**Describe & demonstrate the (position, features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and clinical aspects of) important male & female pelvic viscera** **Objectives** 1- At the end of the session the phase 1 student must be able to describe position of important male pelvic viscera correctly 2- At the end of the session the phase 1 student must be able to describe position of important female pelvic viscera correctly 3- At the end of the session the phase 1 student must be able to describe features of important male pelvic viscera correctly 4- At the end of the session the phase 1 student must be able to describe features of important female pelvic viscera correctly 5- At the end of the session the phase 1 student must be able to describe important peritoneal and other relations of important male pelvic viscera correctly 6- At the end of the session the phase 1 student must be able to describe important peritoneal and other relations of female pelvic viscera correctly 7- At the end of the session the phase 1 student must be able to describe blood supply of important male pelvic viscera correctly 8- At the end of the session the phase 1 student must be able to describe blood supply of important female pelvic viscera correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	9- At the end of the session the phase 1 student must be able to describe of important nerve supply male pelvic viscera correctly 10- At the end of the session the phase 1 student must be able to describe of important nerve supply female pelvic viscera correctly 11- At the end of the session the phase 1 student must be able to describe important fem lymphatic drainage with clinical aspects of male pelvic viscera correctly 12- At the end of the session the phase 1 student must be able to describe lymphatic drainage and clinical aspects of important female pelvic viscera correctly At the end of the session the phase 1 student must be able to describe position of important male pelvic viscera correctly 13- At the end of the session the phase 1 student must be able to demonstrate position of important female pelvic viscera correctly 14- At the end of the session the phase 1 student must be able to demonstrate features of important male pelvic viscera correctly 15- At the end of the session the phase 1 student must be able to demonstrate features of important female pelvic viscera correctly 16- At the end of the session the phase 1 student must be able to demonstrate features of important female pelvic viscera correctly 17- At the end of the session the phase 1 student must be able to demonstrate position of important female pelvic viscera correctly 18- At the end of the session the phase 1 student must be able to demonstrate features of important male pelvic viscera correctly 19- At the end of the session the phase 1 student must be able to demonstrate features of important female pelvic viscera correctly 20- At the end of the session the phase 1 student must be able to demonstrate important peritoneal and other relations of important male pelvic viscera correctly 21- At the end of the session the phase 1 student must be able to demonstrate important peritoneal and other relations of female pelvic viscera correctly 22- At the end of the session the phase 1 student must be able to demonstrate blood supply of important male pelvic viscera correctly 23- At the end of the session the phase 1 student must be able to demonstrate blood supply of important female pelvic viscera correctly 24- At the end of the session the phase 1 student must be able to demonstrate of important nerve supply male pelvic viscera correctly 25- At the end of the session the phase 1 student must be able to demonstrate of important nerve supply female pelvic viscera correctly 26- At the end of the session the phase 1 student must be able to								

	demonstrate important male lymphatic drainage with clinical aspects of male pelvic viscera correctly 27- At the end of the session the phase 1 student must must be able to demonstrate important female lymphatic drainage with clinical aspects of female pelvic viscera correctly								
AN48.3	**Describe & demonstrate the origin, course, important relations and branches of internal iliac artery** **Objectives** 1-At the end of the session the phase 1 student must be able to describe origin of internal iliac artery correctly 2-At the end of the session the phase 1 student must be able to describe course of internal iliac artery correctly 3-At the end of the session the phase 1 student must be able to describe important relations of internal iliac artery correctly 4- At the end of the session the phase 1 student must be able to describe branches of internal iliac artery correctly 5-At the end of the session the phase 1 student must must be able to demonstrate origin of internal iliac artery correctly 6-At the end of the session the phase 1 student must must be able to demonstrate course of internal iliac artery correctly 7-At the end of the session the phase 1 student must must be able to demonstrate important relations of internal iliac artery correctly 8-At the end of the session the phase 1 student must must be able to demonstrate branches of internal iliac artery correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN48.4	**Describe the branches of sacral plexus** **Objectives** 1-At the end of the session the phase 1 student must must be able to describe the branches of sacral plexus correctly 2- At the end of the session the phase 1 student must must be able to identify the branches of sacral plexuscorrectly	K	KH	Y	Lecture	Written			
AN48.5	**Explain the anatomical basis of suprapubic cystostomy, Urinary obstruction in benign prostatic hypertrophy, Retroverted uterus, Prolapse uterus, Internal and external haemorrhoids, Anal fistula, Vasectomy, Tubal pregnancy & Tubal ligation** **Objectives** 1-At the end of the session the phase 1 student should be able to explain the anatomical basis of suprapubic cystostomy correctly 2-At the end of the session the phase 1 student should be able to explain the urinary obstruction in benign prostatic hypertrophy correctly 3-At the end of the session the phase 1 student should be able to explain the anatomical basis of retroverted uterus correctly 4-At the end of the session the phase 1 student should be able to	K	KH	N	Lecture	Written		General Surgery	

	explain the anatomical basis of prolapse uterus correctly 5-At the end of the session the phase 1 student should be able to explain the anatomical basis of Internal with external haemorrhoids correctly 6-At the end of the session the phase 1 student should be able to explain the anatomical basis of anal fistula correctly 7-At the end of the session the phase 1 student should be able to explain the anatomical basis of vasectomy correctly 8-At the end of the session the phase 1 student should be able to explain the anatomical basis of tubal pregnancy correctly 9-At the end of the session the phase 1 student should be able to explain the anatomical basis of tubal ligation correctly								
AN48.6	**Describe the neurological basis of Automatic bladder** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the neurological basis of Automatic bladder correctly 2-At the end of the session the phase 1 student should be able to discuss the neurological basis of Automatic bladder correctly	K	KH	N	Lecture	Written		General Surgery	

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN48.7	**Mention the lobes involved in benign prostatic hypertrophy & prostatic cancer** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the lobes involved in benign prostatic hypertrophy correctly 2-At the end of the session the phase 1 student should be able to describe the lobes involved in prostatic cancer correctly 3-At the end of the session the phase 1 student should be able to discuss the lobes involved in benign prostatic hypertrophy correctly 4-At the end of the session the phase 1 student should be able to discuss the lobes involved in prostatic cancer correctly	K	KH	N	Lecture	Written		General Surgery	
AN48.8	**Mention the structures palpable during vaginal & rectal examination** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the structures palpable during vaginal examination correctly 2-At the end of the session the phase 1 student should be able to describe the structures palpable during rectal examination correctly 3-At the end of the session the phase 1 student should be able to discuss the structures palpable during vaginal examination correctly 4-At the end of the session the phase 1 student should be able to discuss the structures palpable during rectal examination correctly	K	KH	N	Lecture	Written		Obstetrics & Gynaecology General Surgery	

Topic:Perineum		Number ofcompetencies:(5)			Number of procedures for certification:(NIL)				
AN49.1	**Describe & demonstrate the superficial & deep perineal pouch (boundaries and contents)** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the boundaries of superficial perineal pouch correctly 2-At the end of the session the phase 1 student must be able to describe the contents of superficial perineal pouch correctly 3-At the end of the session the phase 1 student must be able to discuss the boundaries of superficial perineal pouch correctly 4-At the end of the session the phase 1 student must be able to discuss the contents of superficial perineal pouch correctly 5-At the end of the session the phase 1 student must be able to identify the boundaries of superficial perineal pouch correctly 6-At the end of the session the phase 1 student must be able to identify the contents of superficial perineal pouch correctly 7-At the end of the session the phase 1 student must be able to demonstrate the boundaries of superficial with deep perineal pouch correctly 8-At the end of the session the phase 1 student must be able to demonstrate the contents of superficial with deep perineal pouch correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		Obstetrics & Gynaecology	
AN49.2	**Describe & identify Perineal body** **Objectives** 1-At the end of the session the phase 1 student must be able to describe perineal body correctly 2-At the end of the session the phase 1 student must be able to discuss perineal body correctly 3-At the end of the session the phase 1 student must be able to identify perineal body correctly 4-At the end of the session the phase 1 student must be able to demonstrate perineal body with its clinical anatomy correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		Obstetrics & Gynaecology	
AN49.3	**Describe & demonstrate Perineal membrane in male & female** **Objectives** 1-At the end of the session the phase 1 student must be able to describe perineal membrane in male correctly 2-At the end of the session the phase 1 student must be able to discuss perineal membrane in male correctly 3-At the end of the session the phase 1 student must be able to identify perineal membrane in male correctly 4-At the end of the session the phase 1 student must be able to demonstrate Perineal membrane in male correctly 5-At the end of the session the phase 1 student must be able to describe perineal membrane in female correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

	6-At the end of the session the phase 1 student must be able to discuss perineal membrane in female correctly 7-At the end of the session the phase 1 student must be able to identify perineal membrane in female correctly 8-At the end of the session the phase 1 student must be able to demonstrate perineal membrane in female correctly								
AN49.4	**Describe & demonstrate boundaries, content & applied anatomy of Ischiorectal fossa** **Objectives** 1-At the end of the session the phase 1 student must be able to describe boundaries of Ischiorectal fossa correctly 2-At the end of the session the phase 1 student must be able to discuss boundaries of Ischiorectal fossa correctly 3-At the end of the session the phase 1 student must be able to identify content of Ischiorectal fossa correctly 4-At the end of the session the phase 1 student must be able to discuss the applied anatomy of Ischiorectal fossa correctly 5-At the end of the session the phase 1 student must be able to present boundaries of Ischiorectal fossa correctly 6-At the end of the session the phase 1 student must be able to elicit the boundaries of Ischiorectal fossa correctly 7-At the end of the session the phase 1 student must be able to enumerate the content of Ischiorectal fossa correctly 8-At the end of the session the phase 1 student must be able to present applied anatomy of Ischiorectal fossa correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Surgery	
AN49.5	**Explain the anatomical basis of Perineal tear, Episiotomy, Perianal abscess and Anal fissure** **Objectives** 1-At the end of the session the phase 1 student should be able to explain the anatomical basis of perineal tear correctly 2-At the end of the session the phase 1 student should be able to explain the anatomical basis of episiotomy correctly 3-At the end of the session the phase 1 student should be able to explain the anatomical basis of perianal abscess correctly 4-At the end of the session the phase 1 student should be able to explain the anatomical basis of anal fissure correctly 5-At the end of the session the phase 1 student should be able to present the comlications of perineal tear correctly 6-At the end of the session the phase 1 student should be able to present the significance of episiotomy correctly 7-At the end of the session the phase 1 student should be able to explain the complications of perianal abscess correctly 8-At the end of the session the phase 1 student should be able to explain the complications of anal fissure correctly	K	KH	N	Lecture	Written		Obstetrics & Gynaecology	

Topic:Vertebralcolumn		**Number ofcompetencies:(4)**			**Number of procedures for certification:(NIL)**				
AN50.1	**Describe the curvatures of the vertebral column** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the curvatures of the vertebral column correctly 2-At the end of the session the phase 1 student must be able to discuss the curvatures of the vertebral column correctly 3-At the end of the session the phase 1 student must be able to make the diagram of curvatures of the vertebral column correctly 4-At the end of the session the phase 1 student must be able to demonstrate the curvatures of the vertebral column correctly	K	KH	Y	Lecture	Written/ Viva voce			
AN50.2	**Describe & demonstrate the type, articular ends, ligaments and movements of Intervertebral joints, Sacroiliac joints & Pubic symphysis** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the type of the Intervertebral joints correctly 2-At the end of the session the phase 1 student must be able to describe the type of the sacroiliac joints correctly 3-At the end of the session the phase 1 student must be able to describe the type of the pubic symphysis correctly 4-At the end of the session the phase 1 student must be able to discuss the articular ends of the intervertebral joints correctly 5-At the end of the session the phase 1 student must be able to discuss the articular ends of sacroiliac joints correctly 6-At the end of the session the phase 1 student must be able to discuss the articular ends of the pubic symphysis correctly 7-At the end of the session the phase 1 student must be able to enumerate the ligaments of Intervertebral joint correctly 8-At the end of the session the phase 1 student must be able to enumerate the ligaments of the sacroiliac joints correctly 9-At the end of the session the phase 1 student must be able to describe the ligaments of pubic symphysis correctly 10-At the end of the session the phase 1 student must be able to demonstrate the movements of Intervertebral joint correctly 11-At the end of the session the phase 1 student must be able to demonstrate the movements of sacroiliac joint correctly 12-At the end of the session the phase 1 student must be able to demonstrate the movements of Pubic symphysis correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN50.3	**Describe lumbar puncture (site, direction of the needle, structures pierced during the lumbar puncture)** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the lumbar puncture correctly 2-At the end of the session the phase 1 student must be able to describe the site of the lumbar puncture correctly 3-At the end of the session the phase 1 student must be able to describe the direction of the needle during lumbar puncture correctly 4-At the end of the session the phase 1 student must be able to discuss the structures pierced during lumbar puncture correctly	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	
AN50.4	**explain the anatomical basis of Scoliosis, Lordosis, Prolapsed disc, Spondylolisthesis & Spina bifida** **Objectives** 1-At the end of the session the phase 1 student should be able to explain the anatomical basis of scoliosis correctly 2- At the end of the session the phase 1 student should be able to explain the anatomical basis of lordosis correctly 3-At the end of the session the phase 1 student should be able to explain the anatomical basis of prolapsed disc correctly 4-At the end of the session the phase 1 student should be able to explain the anatomical basis of spondylolisthesis correctly 5-At the end of the session the phase 1 student should be able to discuss the anatomical basis of spina bifida correctly 6-At the end of the session the phase 1 student should be able to discuss the anatomical basis of scoliosis correctly 7- At the end of the session the phase 1 student should be able to discuss the anatomical basis of lordosis correctly 8-At the end of the session the phase 1 student should be able to discuss the anatomical basis of prolapsed disc correctly 9-At the end of the session the phase 1 student should be able to discuss the anatomical basis of spondylolisthesis correctly 10-At the end of the session the phase 1 student should be able to discuss the anatomical basis of spina bifida correctly	K	KH	N	Lecture	Written		Orthopedics	
Topic:SectionalAnatomy			**Number ofcompetencies:(2)**			**Number of procedures for certification:(NIL)**			

AN51.1	**Describe & identify the cross-section at the level of T8, T10 and L1 (transpyloric plane)** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the cross section at the level of T8 correctly 2-At the end of the session the phase 1 student must be able to describe the cross section at the level of T10 correctly 3-At the end of the session the phase 1 student must be able to describe the cross section at the level of L1 correctly 4-At the end of the session the phase 1 student must be able to draw the diagram of cross section at the level of T8 correctly 5-At the end of the session the phase 1 student must be able to draw the diagram of cross section at the level of T10 correctly 6-At the end of the session the phase 1 student must be able to draw the diagram of cross section at the level of L1 correctly 7-At the end of the session the phase 1 student must be able to demonstrate the cross section at the level of T8 correctly 8-At the end of the session the phase 1 student must be able to demonstrate the cross section at the level of T10 correctly 9-At the end of the session the phase 1 student must be able to demonstrate the cross section at the level of L1 correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		Radiodiagnosis	
AN51.2	**Describe & identify the midsagittal section of male and female pelvis** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the midsagittal section of male pelvic correctly 2-At the end of the session the phase 1 student must be able to describe the midsagittal section of female pelvic correctly 3-At the end of the session the phase 1 student must be able to identify the structures of midsagittal section of male pelvic correctly 4-At the end of the session the phase 1 student must be able to identify the structures of midsagittal section of female pelvic correctly 5-At the end of the session the phase 1 student must be able to draw the diagram of structures of midsagittal section of male pelvic correctly 6-At the end of the session the phase 1 student must be able to draw the diagram of structures of midsagittal section of female pelvic correctly	K	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		Radiodiagnosis	
Topic: Histology&Embryology		**Number ofcompetencies:(8)**				**Number of procedures for certification:(NIL)**			
AN52.1	**Describe & identify the microanatomical features of Gastro-intestinal system:** **Oesophagus, Fundus of stomach, Pylorus of stomach, Duodenum, Jejunum, Ileum, Large intestine, Appendix, Liver, Gall bladder, Pancreas & Suprarenal gland** **Objectives**	K/S	SH	**Y**	Lecture, Practical	Written/ skill assessment			

	1-At the end of the session the phase 1 student must be able to describe the microanatomical features of oesophagus correctly 2-At the end of the session the phase 1 student must be able to describe the microanatomical features of fundus of stomach correctly 3-At the end of the session the phase 1 student must be able to describe the microanatomical features of pylorus of stomach correctly 4-At the end of the session the phase 1 student must be able to describe the microanatomical features of duodenum correctly 5-At the end of the session the phase 1 student must be able to describe the microanatomical features of jejunum correctly 6-At the end of the session the phase 1 student must be able to describe the microanatomical features of Ileum correctly 7-At the end of the session the phase 1 student must be able to describe the microanatomical features of large intestine correctly 8-At the end of the session the phase 1 student must be able to describe the microanatomical features of appendix correctly 9-At the end of the session the phase 1 student must be able to describe the microanatomical features of Liver correctly 10-At the end of the session the phase 1 student must be able to describe the microanatomical features of gall bladder correctly 11-At the end of the session the phase 1 student must be able to describe the microanatomical features of pancreas correctly 12-At the end of the session the phase 1 student must be able to describe the microanatomical features of suprarenal gland correctly 13-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of oesophagus correctly 14-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of fundus of stomach correctly 15-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of pylorus of stomach correctly 16-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of duodenum correctly 17-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of jejunum correctly 18-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of Ileum correctly 19-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of large intestine correctly								

	20-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of appendix correctly 21-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of Liver correctly 22-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of gall bladder correctly 23-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of pancreas correctly 24-At the end of the session the phase 1 student must be able to draw the well labeled diagram of microanatomical features of suprarenal gland correctly								
AN52.2	**Describe & identify the microanatomical features of:** **Urinary system: Kidney, Ureter & Urinary bladder** **Male Reproductive System: Testis, Epididymis,Vas deferens, Prostate & penis** **Female reproductive system: Ovary, Uterus, Uterine tube, Cervix, Placenta & Umbilical cord** **Objectives** 1-At the end of the session the phase 1 student must be able to describe the microanatomical features of Kidney correctly. 2. At the end of the session the phase 1 student must be able to describe the microanatomical features of ureter correctly. 3.At the end of the session the phase 1 student must be able to describe the microanatomical features of urinary bladder correctly. 4. At the end of the session the phase 1 student must be able to describe the microanatomical features of testis correct. 5. At the end of the session the phase 1 student must be able to describe the microanatomical features of epididymis correctly. 6. At the end of the session the phase 1 student must be able to describe the microanatomical features of vas deferens correctly. 7.At the end of the session the phase 1 student must be able to describe the microanatomical features of prostate correctly. 8. At the end of the session the phase 1 student must be able to describe the microanatomical features of penis correctly. 9. At the end of the session the phase 1 student must be able to describe the microanatomical features of ovary correctly. 10. At the end of the session the phase 1 student must be able to describe the microanatomical features of uterus correctly. 11. At the end of the session the phase 1 student must be able to describe the microanatomical features of uterine tube correctly.	K/S	SH	Y	Lecture, Practical	Written/ skill assessment			

	12. At the end of the session the phase 1 student must be able to describe the microanatomical features of cervix correctly. 13. At the end of the session the phase 1 student must be able to describe the microanatomical features of placenta correctly. 14. At the end of the session the phase 1 student must be able to describe the microanatomical features of umbilical cord correctly. 15-At the end of the session the phase 1 student must be able to identify the microanatomical features of Kidney correctly. 16. At the end of the session the phase 1 student must be able to identify the microanatomical features of ureter correctly. 17.At the end of the session the phase 1 student must be able to identify the microanatomical features of urinary bladder correctly. 18. At the end of the session the phase 1 student must be able to identify the microanatomical features of testis correct. 19. At the end of the session the phase 1 student must be able to identify the microanatomical features of epididymis correctly. 20. At the end of the session the phase 1 student must be able to identify the microanatomical features of vas deferens correctly. 21.At the end of the session the phase 1 student must be able to identify the microanatomical features of prostate correctly. 22. At the end of the session the phase 1 student must be able to identify the microanatomical features of penis correctly. 23. At the end of the session the phase 1 student must be able to identify the microanatomical features of ovary correctly. 24. At the end of the session the phase 1 student must be able to identify the microanatomical features of uterus correctly. 25. At the end of the session the phase 1 student must be able to identify the microanatomical features of uterine tube correctly. 26. At the end of the session the phase 1 student must be able to identify the microanatomical features of cervix correctly. 27. At the end of the session the phase 1 student must be able to identify the microanatomical features of placenta correctly. 28. At the end of the session the phase 1 student must be able to identify the microanatomical features of umbilical cord correctly. 29-At the end of the session the phase 1 student must be able to draw the microanatomical features of Kidney correctly. 30. At the end of the session the phase 1 student must be able to draw i the microanatomical features of ureter correctly. 31.At the end of the session the phase 1 student must be able to draw the microanatomical features of urinary bladder correctly. 32. At the end of the session the phase 1 student must be able to draw i the microanatomical features of testis correct. 33. At the end of the session the phase 1 student must be able to draw								

	the microanatomical features of epididymis correctly. 36. At the end of the session the phase 1 student must be able to draw the microanatomical features of vas deferens correctly. 37. At the end of the session the phase 1 student must be able to draw the microanatomical features of prostate correctly. 38. At the end of the session the phase 1 student must be able to draw the microanatomical features of penis correctly. 39. At the end of the session the phase 1 student must be able to draw the microanatomical features of ovary correctly. 40. At the end of the session the phase 1 student must be able to draw the microanatomical features of uterus correctly. 41. At the end of the session the phase 1 student must be able to draw the microanatomical features of uterine tube correctly. 42. At the end of the session the phase 1 student must be able to draw the microanatomical features of cervix correctly. 43. At the end of the session the phase 1 student must be able to draw the microanatomical features of placenta correctly. 44. At the end of the session the phase 1 student must be able to draw the microanatomical features of umbilical cord correctly.								
AN52.3	**Describe & identify the microanatomical features of Cardiooesophageal junction, Corpus luteum** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the development of anterior abdominal wall correctly. 2-At the end of the session the phase 1 student should be able to describe the microanatomical features of cardiooesophageal junction correctly. 3-At the end of the session the phase 1 student should be able to describe the microanatomical features of corpus luteum correctly. 4-At the end of the session the phase 1 student should be able to identify the microanatomical features of cardiooesophageal junction correctly. 5-At the end of the session the phase 1 student should be able to identify the microanatomical features of corpus luteum correctly.	K/S	SH	N	Lecture, Practical	Written/ skill assessment			
AN52.4	**Describe the development of anterior abdominal wall** **Objectives** 1-At the end of the session the phase 1 student should be able to describe the development of anterior abdominal wall correctly. 2. At the end of the session the phase 1 student should be able to describe the developmental anomalies of anterior abdominal wall correctly.	K	KH	N	Lecture	Written/ Viva voce			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN52.5	**Describe the development and congenital anomalies of Diaphragm** **Objectives** 1. At the end of session the phase 1 student must be able to describe the gross anatomy of diaphragm correctly. 2. At the end of session the phase 1 student must be able to explain the development of diaphragm accurately. 3. At the end of session the phase 1 student must be able to enumerate the congenital anomalies of Diaphragm correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN52.6	**Describe the development and congenital anomalies of: Foregut, Midgut & Hindgut** **Objectives** 1. At the end of session the phase 1 student must be able to describe Foregut correctly. 2. At the end of session the phase 1 student must be able to describe Midgut correctly. 3. At the end of session the phase 1 student must be able to describe Hindgut correctly. 4. At the end of session the phase 1 student must be able to enumerate the development of foregut accurately. 5. At the end of session the phase 1 student must be able to enumerate the development of midgut accurately. 6. At the end of session the phase 1 student must be able to enumerate the development of Hindgut accurately. 7. At the end of session the phase 1 student must be able to explain the congenital anomalies of foregut accurately. 8. At the end of session the phase 1 student must be able to congenital anomalies of of midgut accurately. 9. At the end of session the phase 1 student must be able to congenital anomalies of Hindgut accurately.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN52.7	**Describe the development of Urinary system** **Objectives** 1. At the end of session the phase 1 student must be able to explain the development of Urinary system correctly. 2. At the end of session the phase 1 student must be able to discuss the development of Urinary system correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Surgery	
AN52.8	**Describe the development of male & female reproductive system** **Objectives** 1. At the end of session the phase 1 student must be able to explain the male reproductive system correctly. 2. At the end of session the phase 1 student must be able to explain	K	KH	Y	Lecture	Written/ Viva voce		Obstetrics & Gynaecology	

	the female reproductive system correctly. 3. At the end of session the phase 1 student must be able to discuss the male reproductive system accurately. 4. At the end of session the phase 1 student must be able to discuss the female reproductive system accurately.								
Topic:Osteology		**Number ofcompetencies:(4)**				**Number of procedures for certification:(NIL)**			
AN53.1	**Identify & hold the bone in the anatomical position, Describe the salient features, articulations & demonstrate the attachments of muscle groups** **Objectives** 1. At the end of session the phase 1 student must be able to explain the anatomical position of bone accurately. 2. At the end of session the phase 1 student must be able to discuss the anatomical position of bone accurately. 3. At the end of session the phase 1 student must be able to identify the bone correctly. 4. At the end of session the phase 1 student must be able to demonstrate the anatomical position of bone correctly. 5. At the end of session the phase 1 student must be able to explain the salient features of the bone accurately. 6. At the end of session the phase 1 student must be able to list the salient features of the bone accurately. 7. At the end of session the phase 1 student must be able to identify the salient features of the bone accurately. 8. At the end of session the phase 1 student must be able to show the salient features of the bone accurately. 9. At the end of session the phase 1 student must be able to explain the articulation of the bone accurately. 10. At the end of session the phase 1 student must be able to discuss the articulation of the bone accurately. 11. At the end of session the phase 1 student must be able to show the articulation of the bone correctly. 12. At the end of session the phase 1 student must be able to demonstrate the articulation of the bone accurately. 13. At the end of session the phase 1 student must be able to explain the attachments of muscle groups on bone accurately. 14. At the end of session the phase 1 student must be able to discuss the attachments of muscle groups on bone accurately. 15. At the end of session the phase 1 student must be able to identify the attachments of muscle groups on bone correctly. 16. At the end of session the phase 1 student must be able to demonstrate the attachments of muscle groups on bone	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment		General Surgery, Obstetrics & Gynaecology	

	accurately. 17. At the end of session the phase 1 student must be able to demonstrate the attachments of muscle groups on bone correctly.								
AN53.2	**Demonstrate the anatomical position of bony pelvis & show boundaries of pelvic inlet, pelvic cavity, pelvic outlet** **Objectives** 1. At the end of session the phase 1 student must be able to explain the anatomical position of bony pelvis correctly. 2. At the end of session the phase 1 student must be able to discuss the anatomical position of bony pelvis correctly. 3. At the end of session the phase 1 student must be able to show the anatomical position of bony pelvis correctly. 4. At the end of session the phase 1 student must be able to demonstrate the anatomical position of bony pelvis accurately. 5. At the end of session the phase 1 student must be able to explain the boundaries of pelvic inlet correctly. 6. At the end of session the phase 1 student must be able to discuss the boundaries of pelvic inlet correctly. 7. At the end of session the phase 1 student must be able to show the boundaries of pelvic inlet correctly. 8. At the end of session the phase 1 student must be able to demonstrate the boundaries of pelvic inlet correctly. 9. At the end of session the phase 1 student must be able to explain the boundaries of pelvic outlet correctly. 10. At the end of session the phase 1 student must be able to discuss the boundaries of pelvic outlet correctly. 11. At the end of session the phase 1 student must be able to show the boundaries of pelvic outlet correctly. 12. At the end of session the phase 1 student must be able to demonstrate the boundaries of pelvic outlet correctly. 13. At the end of session the phase 1 student must be able to explain the boundaries of pelvic cavity correctly. 14. At the end of session the phase 1 student must be able to discuss the boundaries of pelvic cavity correctly. 15. At the end of session the phase 1 student must be able to show the boundaries of pelvic cavity correctly. 16. At the end of session the phase 1 student must be able to demonstrate the boundaries of pelvic cavity correctly. 17. At the end of session the phase 1 student must be able to explain the diameter of bony pelvis accurately. 18. At the end of session the phase 1 student must be able to	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment		Obstetrics & Gynaecology	

	describe the axes of bony pelvis accurately.								
AN53.3	**Define true pelvis and false pelvis and demonstrate sex determination in male & female bony pelvis** **Objectives** 1. At the end of session the phase 1 student must be able to describe the true pelvis and false pelvis accurately. 2. At the end of session the phase 1 student must be able to differentiate the true pelvis and false pelvis accurately. 3. At the end of session the phase 1 student must be able to describe the sex determination of bony pelvis accurately. 4. At the end of session the phase 1 student must be able to identify the sex determination of bony pelvis accurately. 5. At the end of session the phase 1 student must be able to demonstrate the sex determination of bony pelvis accurately.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment		Obstetrics & Gynaecology	
AN53.4	**Explain and demonstrate clinical importance of bones of abdominopelvic region (sacralization of lumbar vertebra, Lumbarization of 1st sacral vertebra, types of bony pelvis & Coccyx)** **Objectives** 1. At the end of session the phase 1 student must be able to describe the sacralization of lumbar vertebra correctly. 2. At the end of session the phase 1 student must be able to describe the Lumbarization of 1st sacral vertebra correctly. 3. At the end of session the phase 1 student must be able to explain the types of bony pelvis & Coccyx correctly. 4. At the end of session the phase 1 student must be able to demonstrate the sacralization of lumbar vertebra correctly. 5. At the end of session the phase 1 student must be able to demonstrate the Lumbarization of 1st sacral vertebra correctly. 6. At the end of session the phase 1 student must be able to show the types of bony pelvis & Coccyx correctly.	K/S	SH	N	Lecture, DOAP session	Viva voce/ skill assessment			
Topic:Radiodiagnosis		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN54.1	**Describe & identify features of plain X ray abdomen** **Objectives** 1. At the end of session the phase 1 student must be able to explain the plain X ray abdomen accurately. 2. At the end of session the phase 1 student must be able to discuss the plain X ray abdomen accurately. 3. At the end of session the phase 1 student must be able to identify the features of plain X ray of abdomen correctly.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment		Radiodiagnosis	

	4. At the end of session the phase 1 student must be able to demonstrate the plain X ray of abdomen accurately.								
AN54.2	**Describe & identify the special radiographs of abdominopelvic region (contrast X ray Barium swallow, Barium meal, Barium enema, Cholecystography, Intravenous pyelography & Hysterosalpingography)** **Objectives** 1. At the end of session the phase 1 student must be able to explain the special radiographs of abdominopelvic region accurately. 2. At the end of session the phase 1 student must be able to identify the special radiographs of abdominopelvic region correctly. 3. At the end of session the phase 1 student must be able to show the special radiographs of abdominopelvic region accurately. 4. At the end of session the phase 1 student must be able to demonstrate the special radiographs of abdominopelvic region accurately.	K/S	SH	Y	Lecture, DOAP session	Viva voce/ skill assessment		Radiodiagnosis	
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN54.3	**Describe role of ERCP, CT abdomen, MRI, Arteriography in radiodiagnosis of abdomen** **Objectives** 1. At the end of session the phase 1 student must be able to explain the role of ERCP in radiodiagnosis of abdomen correctly. 2. At the end of session the phase 1 student must be able to discuss the role of ERCP in radiodiagnosis of abdomen accurately. 3. At the end of session the phase 1 student must be able to explain the role of CT of abdomen correctly. 4. At the end of session the phase 1 student must be able to discuss the role of CT of abdomen accurately. 5. At the end of session the phase 1 student must be able to explain the role of MRI of abdomen correctly. 6. At the end of session the phase 1 student must be able to discuss the role of MRI of abdomen accurately. 7. At the end of session the phase 1 student must be able to explain the role of Arteriography in radiodiagnosis of abdomen Correctly. 8. At the end of session the phase 1 student must be able to discuss the role of Arteriography in radiodiagnosis of	K	KH	N	Lecture	Viva voce		Radiodiagnosis	

	abdomen accurately.								
Topic:Surfacemarking		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			
AN55.1	**Demonstrate the surface marking of; Regions and planes of abdomen, Superficial inguinal ring, Deep inguinal ring , McBurney's point, Renal Angle & Murphy's point** **Objectives** 1. At the end of session the phase 1 student must be able to describe the Regions and planes of abdomen accurately. 2. At the end of session the phase 1 student must be able to describe the superficial inguinal ring accurately. 3. At the end of session the phase 1 student must be able to describe the deep inguinal ring accurately. 4. At the end of session the phase 1 student must be able to describe the McBurney's point accurately. 5. At the end of session the phase 1 student must be able to describe the Renal Angle accurately. 6. At the end of session the phase 1 student must be able to describe the Murphy's point accurately. 7. At the end of session the phase 1 student must be able to discuss the Regions and planes of abdomen accurately. 8. At the end of session the phase 1 student must be able to discuss the Superficial inguinal ring accurately. 9. At the end of session the phase 1 student must be able to discuss the deep inguinal ring accurately. 10. At the end of session the phase 1 student must be able to discuss the McBurney's point accurately. 11. At the end of session the phase 1 student must be able to discuss the Renal Angle accurately. 12. At the end of session the phase 1 student must be able to discuss the Murphy's point accurately. 13. At the end of session the phase 1 student must be able to identify the Renal Angle accurately. 14. At the end of session the phase 1 student must be able to identify the Murphy's point accurately. 15. At the end of session the phase 1 student must be able to identify the Regions and planes of abdomen accurately. 16. At the end of session the phase 1 student must be able to identify the Superficial inguinal ring accurately. 17. At the end of session the phase 1 student must be able to identify	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment		General Surgery	

	the deep inguinal ring accurately. 18. At the end of session the phase 1 student must be able to identify the McBurney's point accurately. 19. At the end of session the phase 1 student must be able to identify the Renal Angle accurately. 20. At the end of session the phase 1 student must be able to identify the Murphy's point accurately. 21. At the end of session the phase 1 student must be able to demonstrate the Regions and planes of abdomen accurately. 22. At the end of session the phase 1 student must be able to demonstrate the superficial inguinal ring accurately. 23. At the end of session the phase 1 student must be able to demonstrate the deep inguinal ring accurately. 24. At the end of session the phase 1 student must be able to demonstrate the McBurney's point accurately. 25. At the end of session the phase 1 student must be able to demonstrate the Renal Angle accurately. 26. At the end of session the phase 1 student must be able to demonstrate the Murphy's point accurately. 27. At the end of session the phase 1 student must be able to explain the clinical anatomy of Superficial inguinal ring accurately. 28. At the end of session the phase 1 student must be able to explain the clinical anatomy of deep inguinal ring accurately. 29. At the end of session the phase 1 student must be able to explain the clinical anatomy of McBurney's point accurately.								
AN55.2	**Demonstrate the surface projections of: Stomach, Liver, Fundus of gall bladder, Spleen, Duodenum, Pancreas, Ileocaecal junction, Kidneys & Root of mesentery** **Objectives** 1. At the end of session the phase 1 student must be able to describe the surface anatomy of Stomach correctly. 2. At the end of session the phase 1 student must be able to describe the surface anatomy of liver correctly. 3. At the end of session the phase 1 student must be able to describe the surface anatomy of fundus of gall bladder correctly. 4. At the end of session the phase 1 student must be able to describe the surface anatomy of duodenum correctly. 5. At the end of session the phase 1 student must be able to describe the surface anatomy of pancreas correctly. 6. At the end of session the phase 1 student must be able to describe the surface anatomy of ileocaecal junction correctly. 7. At the end of session the phase 1 student must be able to	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Viva voce/ skill assessment		General Surgery	

	describe the surface anatomy of Kidney correctly. 8. At the end of session the phase 1 student must be able to describe the surface anatomy of root of mesentry correctly. 9. At the end of session the phase 1 student must be able to demonstrate the surface anatomy of liver in simulated environment correctly. 10. At the end of session the phase 1 student must be able to demonstrate the surface anatomy of fundus of gall bladder in simulated environment correctly. 11. At the end of session the phase 1 student must be able to demonstrate the surface anatomy of duodenum in simulated environment correctly. 12. At the end of session the phase 1 student must be able to demonstrate the surface anatomy of pancreas in simulated environment correctly. 13. At the end of session the phase 1 student must be able to demonstrate the surface anatomy of ileocaecal junction in simulated environment correctly. 14. At the end of session the phase 1 student must be able to demonstrate the surface anatomy of Kidney in simulated environment correctly. 15. At the end of session the phase 1 student must be able to demonstrate the surface anatomy of root of mesentery in simulated environment correctly.								
Topic: Meninges&CSF		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			
AN56.1	**Describe & identify various layers of meninges with its extent & modifications** **Objectives** 1. At the end of session the phase 1 student must be able to describe the meninges accurately. 2. At the end of session the phase 1 student must be able to identify the various layers the meninges correctly. 3. At the end of session the phase 1 student must be able to demonstrate the extent & modifications of meninges correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Medicine	
AN56.2	**Describe circulation of CSF with its applied anatomy** **Objectives** 1. At the end of session the phase 1 student must be able to explain circulation of CSF accurately. 2. At the end of session the phase 1 student must be able to describe the composition of CSF accurately. 3. At the end of session the phase 1 student must be able to describe the applied anatomy of circulation of CSF accurately.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Physiology

Topic:SpinalCord		Number ofcompetencies:(5)			Number of procedures for certification:(NIL)				
AN57.1	**Identify external features of spinal cord** **Objectives** 1. At the end of session the phase 1 student must be able to describe the spinal cord accurately. 2. At the end of session the phase 1 student must be able to explain the external features of spinal cord correctly. 3. At the end of session the phase 1 student must be able to discuss the external features of spinal cord accurately. 4. At the end of session the phase 1 student must be able to identify the external features of spinal cord correctly. 5. At the end of session the phase 1 student must be able to demonstrate the external features of spinal cord accurately.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN57.2	**Describe extent of spinal cord in child & adult with its clinical implication** **Objectives** 1. At the end of session the phase 1 student must be able to explain the extent of spinal cord in child & adult correctly. 2. At the end of session the phase 1 student must be able to explain the segment of spinal cord in child & adult correctly. 3. At the end of session the phase 1 student must be able to enumerate the clinical implication of spinal cord in child & adult correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN57.3	**Draw & label transverse section of spinal cord at mid-cervical & mid-thoracic level** **Objectives** 1. At the end of session the phase 1 student must be able to describe the transverse section of spinal cords at mid-cervical accurately. 2. At the end of session the phase 1 student must be able to explain the transverse section of spinal cord at mid- thoracic level accurately. 3. At the end of session the phase 1 student must be able to discuss the transverse section of spinal cords at mid-cervical accurately. 4. At the end of session the phase 1 student must be able to discuss the transverse section of spinal cord at mid- thoracic level accurately.	K	KH	Y	Lecture	Written/ Viva voce			
AN57.4	**Enumerate ascending & descending tracts at mid thoracic level of spinal cord** **Objectives** 1. At the end of session the phase 1 student must be able to describe the ascending tracts at mid thoracic level of spinal cord correctly. 2. At the end of session the phase 1 student must be able to describe the descending tracts at mid thoracic level of spinal cord correctly.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Physiology

	3. At the end of session the phase 1 student must be able to discuss the ascending tracts at mid thoracic level of spinal cord correctly. 4. At the end of session the phase 1 student must be able to discuss the descending tracts at mid thoracic level of spinal cord correctly.								
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN57.5	**Describe anatomical basis of syringomyelia** **Objectives** 1. At the end of session the phase 1 student must be able to define the anatomical basis of syringomyelia accurately. 2. At the end of session the phase 1 student must be able to discuss the anatomical basis of syringomyelia correctly.	K	KH	N	Lecture	Written		General Medicine	Physiology
Topic:MedullaOblongata		**Number ofcompetencies:(4)**				**Number of procedures for certification:(NIL)**			
AN58.1	**Identify external features of medulla oblongata** **Objectives** 1. At the end of session the phase 1 student must be able to explain the external features of medulla oblongata accurately. 2. At the end of session the phase 1 student must be able to discuss the external features of medulla oblongata accurately. 3. At the end of session the phase 1 student must be able to identify the external features of medulla oblongata accurately. 4. At the end of session the phase 1 student must be able to demonstrate the external features of medulla oblongata accurately.	K/S	SH	Y	Lecture, DOAP session	Written/ Viva voce/ skill assessment			
AN58.2	**Describe transverse section of medulla oblongata at the level of 1) pyramidal decussation, 2) sensory decussation 3) ION** **Objectives** 1. At the end of session the phase 1 student must be able to enumerate the transverse section of medulla oblongata at the level of pyramidal decussation accurately. 2. At the end of session the phase 1 student must be able to enumerate the transverse section of medulla oblongata at the level of sensory decussation accurately. 3. At the end of session the phase 1 student must be able to enumerate the transverse section of medulla oblongata at the level of ION accurately. 4. At the end of session the phase 1 student must be able to discuss the transverse section of medulla oblongata at the level of pyramidal decussation accurately. 5. At the end of session the phase 1 student must be able to discuss the transverse section of medulla oblongata at the level of sensory decussation accurately.	K	KH	Y	Lecture	Written/ Viva voce			

	6. At the end of session the phase 1 student must be able to discuss the transverse section of medulla oblongata at the level of ION accurately.								
AN58.3	**Enumerate cranial nerve nuclei in medulla oblongata with their functional group** **Objectives** 1. At the end of session the phase 1 student must be able to explain the cranial nerve nuclei in medulla oblongata correctly. 2. At the end of session the phase 1 student must be able to describe the functional group of cranial nerve nuclei in medulla oblongata accurately.	K	KH	Y	Lecture	Written/ Viva voce			Physiology
AN58.4	**Describe anatomical basis & effects of medial & lateral medullary syndrome** **Objectives** 1. At the end of session the phase 1 student should be able to define the anatomical basis of medial medullary syndrome accurately. 2. At the end of session the phase 1 student should be able to define the anatomical basis of lateral medullary syndrome accurately. 3. At the end of session the phase 1 student should be able to describe the effects of medial medullary syndrome accurately. 4. At the end of session the phase 1 student should be able to describe the effects of lateral medullary syndrome accurately.	K	KH	N	Lecture	Written		General Medicine	Physiology
Topic:Pons		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN59.1	**Identify external features of pons** **Objectives** 1. At the end of session the phase 1 student must be able to describe the external features of pons correctly. 2. At the end of session the phase 1 student must be able to discuss the external features of pons correctly. 3. At the end of session the phase 1 student must be able to identify the external features of pons correctly. 4. At the end of session the phase 1 student must be able to demonstrate the external features of pons correctly.	K/S	SH	Y	Lecture, DOAP session	Written/ Viva voce/ skill assessment			Physiology
AN59.2	**Draw & label transverse section of pons at the upper and lower level** **Objectives** 1. At the end of session the phase 1 student must be able to describe the transverse section of pons at the upper level accurately. 2. At the end of session the phase 1 student must be able to describe the transverse section of pons at the lower level accurately. 3. At the end of session the phase 1 student must be able to identify the transverse section of pons at the upper level accurately. 4. At the end of session the phase 1 student must be able to identify	K	KH	Y	Lecture	Written/ Viva voce			

	the transverse section of pons at lower level accurately.								
AN59.3	**Enumerate cranial nerve nuclei in pons with their functional group** **Objectives** 1. At the end of session the phase 1 student must be able to explain the cranial nerve nuclei in pons correctly. 2. At the end of session the phase 1 student must be able to explain the functional group of cranial nerve nuclei in pons correctly. 3. At the end of session the phase 1 student must be able to describe the origin of cranial nerve nuclei in pons correctly. 4. At the end of session the phase 1 student must be able to demonstrate the origin of cranial nerve nuclei in pons accuratetly.	K	KH	Y	Lecture	Written/ Viva voce			
Topic:Cerebellum		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN60.1	**Describe & demonstrate external & internal features of cerebellum** **Objectives** 1. At the end of session the phase 1 student must be able to describe the cerebellum accurately. 2. At the end of session the phase 1 student must be able to explain the external features of cerebellum correctly. 3. At the end of session the phase 1 student must be able to discuss the external features of cerebellum accurately. 4. At the end of session the phase 1 student must be able to identify the external features of cerebellum correctly. 5. At the end of session the phase 1 student must be able to demonstrate the external features of cerebellum accurately. 6. At the end of session the phase 1 student must be able to explain the internal features of cerebellum correctly. 7. At the end of session the phase 1 student must be able to discuss the internal features of cerebellum accurately. 8. At the end of session the phase 1 student must be able to identify the internal features of cerebellum correctly. 9. At the end of session the phase 1 student must be able to demonstrate the internal features of cerebellum accurately.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN60.2	**Describe connections of cerebellar cortex and intracerebellar nuclei** **Objectives** 1. At the end of session the phase 1 student must be able to explain the connections of cerebellar cortex accurately. 2. At the end of session the phase 1 student must be able to enumerate the connections of intracerebellar nuclei correctly.	K	KH	Y	Lecture	Written/ Viva voce			
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**

AN60.3	**Describe anatomical basis of cerebellar dysfunction** **Objectives** 1. At the end of session the phase 1 student should be able to explain the anatomical basis of cerebellar dysfunction correctly. 2. At the end of session the phase 1 student should be able to discuss the anatomical basis of cerebellar dysfunction correctly.	K	KH	N	Lecture	Written		General Medicine	Physiology
Topic:Midbrain		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN61.1	**Identify external & internal features of midbrain** **Objectives** 1. At the end of session the phase 1 student must be able to describe the midbrain accurately. 2. At the end of session the phase 1 student must be able to explain the external features of midbrain correctly. 3. At the end of session the phase 1 student must be able to discuss the external features of midbrain accurately. 4. At the end of session the phase 1 student must be able to identify the external features of midbrain correctly. 5. At the end of session the phase 1 student must be able to demonstrate the external features of midbrain accurately. 6. At the end of session the phase 1 student must be able to explain the internal features of midbrain correctly. 7. At the end of session the phase 1 student must be able to discuss the internal features of midbrain accurately. 8. At the end of session the phase 1 student must be able to identify the internal features of midbrain correctly. 9. At the end of session the phase 1 student must be able to demonstrate the internal features of midbrain accurately.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			
AN61.2	**Describe internal features of midbrain at the level of superior & inferior colliculus** **Objectives** 1. At the end of session the phase 1 student must be able to describe the Midbrain accurately. 2. At the end of session the phase 1 student must be able to explain the internal features of midbrain at the level of superior colliculus correctly. 3. At the end of session the phase 1 student must be able to discuss the internal features of midbrain at the level of inferior colliculus accurately. 4. At the end of session the phase 1 student must be able to identify the internal features of midbrain at the level of superior colliculus correctly.	K	KH	Y	Lecture	Written/ Viva voce			
AN61.3	**Describe anatomical basis & effects of Benedikt's and Weber's syndrome** **Objectives**	K	KH	N	Lecture	Written		General Medicine	Physiology

	1. At the end of session the phase 1 student should be able to define the anatomical basis of Benedikt's syndrome correctly. 2. At the end of session the phase 1 student should be able to define the anatomical basis Weber's syndrome correctly. 3. At the end of session the phase 1 student should be able to enumerate the effects of Benedikt's syndrome accurately. 4. At the end of session the phase 1 student should be able to enumerate the effects of Weber's syndrome accurately.								
Topic: Cranial nerve nuclei &Cerebralhemispheres		**Number ofcompetencies:(6)**				**Number of procedures for certification:(NIL)**			
AN62.1	**Enumerate cranial nerve nuclei with its functional component** **Objectives** 1. At the end of session the phase 1 student must be able to describe the cranial nerve nuclei accurately. 2. At the end of session the phase 1 student must be able to describe the functional component of cranial nerve nuclei accurately.	K	KH	Y	Lecture	Written/ Viva voce			
AN62.2	**Describe & demonstrate surfaces, sulci, gyri, poles, & functional areas of cerebral hemisphere** **Objectives** 1. At the end of session the phase 1 student must be able to explain the surfaces of cerebral hemisphere accurately. 2. At the end of session the phase 1 student must be able to discuss the surfaces of cerebral hemisphere accurately. 3. At the end of session the phase 1 student must be able to identify the surfaces of cerebral hemisphere accurately. 4. At the end of session the phase 1 student must be able to demonstrate the surfaces of cerebral hemisphere accurately. 5. At the end of session the phase 1 student must be able to explain the sulci of cerebral hemisphere correctly. 6. At the end of session the phase 1 student must be able to discuss the sulci of cerebral hemisphere accurately. 7. At the end of session the phase 1 student must be able to identify the sulci of cerebral hemisphere correctly. 8. At the end of session the phase 1 student must be able to demonstrate the sulci of cerebral hemisphere accurately. 9. At the end of session the phase 1 student must be able to explain the gyri of cerebral hemisphere correctly. 10. At the end of session the phase 1 student must be able to discuss the gyri of cerebral hemisphere accurately. 11. At the end of session the phase 1 student must be able to identify the gyri of cerebral hemisphere correctly. 12. At the end of session the phase 1 student must be able to demonstrate the gyri of cerebral hemisphere accurately 13. At the end of session the phase 1 student must be able to explain the poles of cerebral hemisphere accurately. 14. At the end of session the phase 1 student must be able to discuss the	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Medicine	Physiology

	poles of cerebral hemisphere correctly. 15. At the end of session the phase 1 student must be able to identify the poles of cerebral hemisphere accurately. 16. At the end of session the phase 1 student must be able to demonstrate the poles of cerebral hemisphere correctly. 17. At the end of session the phase 1 student must be able to explain the functional areas of cerebral hemisphere accurately. 18. At the end of session the phase 1 student must be able to discuss the functional areas of cerebral hemisphere correctly. 19. At the end of session the phase 1 student must be able to identify the functional areas of cerebral hemisphere correctly. 20. At the end of session the phase 1 student must be able to demonstrate the functional areas of cerebral hemisphere accurately.								
AN62.3	**Describe the white matter of cerebrum** **Objectives** 1. At the end of session the phase 1 student must be able to define the white matter of cerebrum correctly. 2. At the end of session the phase 1 student must be able to discuss the white matter of cerebrum accurately.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Physiology
AN62.4	**Enumerate parts & major connections of basal ganglia & limbic lobe** **Objectives** 1. At the end of session the phase 1 student must be able to explain the parts of basal ganglia correctly 2. At the end of session the phase 1 student must be able to discuss the parts of basal ganglia correctly 3. At the end of session the phase 1 student must be able to explain the major connections of basal ganglia correctly 4. At the end of session the phase 1 student must be able to discuss the major connections of basal ganglia correctly 5. At the end of session the phase 1 student must be able to explain the parts of limbic lobe correctly 6. At the end of session the phase 1 student must be able to discuss the parts of limbic lobe correctly 7. At the end of session the phase 1 student must be able to explain the major connections of limbic lobe correctly 8. At the end of session the phase 1 student must be able to discuss the major connections of limbic lobe correctly	K	KH	Y	Lecture	Written/ Viva voce			Physiology
AN62.5	**Describe boundaries, parts, gross relations, major nuclei and connections of dorsal thalamus, hypothalamus, epithalamus, metathalamus and subthalamus.** **Objectives** 1. At the end of session the phase 1 student must be able to explain the boundaries of dorsal thalamus correctly 2. At the end of session the phase 1 student must be able to enumerate the parts of dorsal thalamus accurately. 3. At the end of session the phase 1 student must be able to describe the gross relations of dorsal thalamus accurately.	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Physiology

	4. At the end of session the phase 1 student must be able to explain the major nuclei of dorsal thalamus correctly 5. At the end of session the phase 1 student must be able to describe the connections of dorsal thalamus correctly 6. At the end of session the phase 1 student must be able to explain the boundaries of hypo thalamus correctly 7. At the end of session the phase 1 student must be able to enumerate the parts of hypo thalamus accurately. 8. At the end of session the phase 1 student must be able to describe the gross relations of hypo thalamus accurately. 9. At the end of session the phase 1 student must be able to explain the major nuclei of hypo thalamus correctly 10. At the end of session the phase 1 student must be able to describe the connections of hypo thalamus correctly 11. At the end of session the phase 1 student must be able to explain the boundaries of epithalamus correctly 12. At the end of session the phase 1 student must be able to enumerate the parts of epithalamus accurately. 13. At the end of session the phase 1 student must be able to describe the gross relations of epithalamus accurately. 14. At the end of session the phase 1 student must be able to explain the major nuclei of epithalamus correctly 15. At the end of session the phase 1 student must be able to describe the connections of epithalamus correctly 16. At the end of session the phase 1 student must be able to explain the boundaries of metathalamus correctly 17. At the end of session the phase 1 student must be able to enumerate the parts of metathalamus accurately. 18. At the end of session the phase 1 student must be able to describe the gross relations of metahalamus accurately. 19. At the end of session the phase 1 student must be able to explain the major nuclei of metahalamus correctly 20. At the end of session the phase 1 student must be able to describe the connections of metathalamus correctly 21. At the end of session the phase 1 student must be able to explain the boundaries of metathalamus correctly 22. At the end of session the phase 1 student must be able to enumerate the parts of suthalamus accurately. 23. At the end of session the phase 1 student must be able to describe the gross relations of subhalamus accurately. 24. At the end of session the phase 1 student must be able to explain the major nuclei of subhalamus correctly 25. At the end of session the phase 1 student must be able to describe the connections of subthalamus correctly								

AN62.6	**Describe & identify formation, branches & major areas of distribution of circle of Willis** **Objectives** 1. At the end of session the phase 1 student must be able to explain the formation of circle of Willis correctly. 2. At the end of session the phase 1 student must be able to enumerate the branches of circle of Willis accurately. 3. At the end of session the phase 1 student must be able to explain the major areas of distribution of circle of Willis correctly. 4. At the end of session the phase 1 student must be able to show the formation of circle of Willis correctly. 5. At the end of session the phase 1 student must be able to identify the branches of circle of Willis correctly. 6. At the end of session the phase 1 student must be able to demonstrate the major areas of distribution of circle of Willis correctly.	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		General Medicine	Physiology

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
Topic:VentricularSystem		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			
AN63.1	**Describe & demonstrate parts, boundaries & features of IIIrd, IVth & lateral ventricle** **Objectives** 1. At the end of session the phase 1 student must be able to enumerate the parts of IIIrd, ventricle accurately. 2. At the end of session the phase 1 student must be able to identify the parts of IIIrd, ventricle accurately. 3. At the end of session the phase 1 student must be able to demonstrate the parts of IIIrd, ventricle correctly 4. At the end of session the phase 1 student must be able to enumerate the parts of IVth ventricle accurately. 5. At the end of session the phase 1 student must be able to identify the parts of IVth ventricle accurately. 6. At the end of session the phase 1 student must be able to demonstrate the parts of IVth ventricle correctly. 7. At the end of session the phase 1 student must be able to enumerate the parts of lateral ventricle accurately. 8. At the end of session the phase 1 student must be able to identify the parts of lateral ventricle accurately. 9. At the end of session the phase 1 student must be able to demonstrate the parts of lateral ventricle correctly	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment			Physiology
AN63.2	**Describe anatomical basis of congenital hydrocephalus** **Objectives** 1. At the end of session the phase 1 student should be able to define the anatomical basis of congenital hydrocephalus accurately. 2. At the end of session the phase 1 student should be able to discuss the anatomical basis of congenital hydrocephalus accurately.	K	KH	N	Lecture	Written		Pediatrics	Physiology
Topic: Histology&Embryology		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN64.1	**Describe & identify the microanatomical features of Spinal cord, Cerebellum & Cerebrum** **Objectives** 1. At the end of session the phase 1 student must be able to explain the microanatomical features of Spinal cord correctly. 2. At the end of session the phase 1 student must be able to discuss the microanatomical features of Spinal cord correctly.	K/S	SH	Y	Lecture,Practical	Written/ skill assessment			

	3. At the end of session the phase 1 student must be able to identify the microanatomical features of Spinal cord accurately. 4. At the end of session the phase 1 student must be able to draw the diagram of microanatomical features of Spinal cord correctly. 5. At the end of session the phase 1 student must be able to explain the microanatomical features of Cerebellum correctly. 6. At the end of session the phase 1 student must be able to discuss the microanatomical features of Cerebellum correctly. 7. At the end of session the phase 1 student must be able to identify the microanatomical features of Cerebellum accurately. 8. At the end of session the phase 1 student must be able to draw the diagram of microanatomical features of Cerebellum correctly. 9. At the end of session the phase 1 student must be able to explain the microanatomical features of Cerebrum correctly. 10. At the end of session the phase 1 student must be able to discuss the microanatomical features of Cerebrum correctly. 11. At the end of session the phase 1 student must be able to identify the microanatomical features of Cerebrum accurately. 12. At the end of session the phase 1 student must be able to draw the diagram of microanatomical features of Cerebrum correctly.								
AN64.2	**Describe the development of neural tube, spinal cord, medulla oblongata, pons, midbrain, cerebral hemisphere & cerebellum** **Objectives** 1. At the end of session the phase 1 student must be able to enumerate the development of neural tube correctly. 2. At the end of session the phase 1 student must be able to describe the congenital anomalies of neural tube accurately. 3. At the end of session the phase 1 student must be able to enumerate the development of spinal cord correctly. 4. At the end of session the phase 1 student must be able to describe the congenital anomalies of spinal cord accurately 5. At the end of session the phase 1 student must be able to enumerate the development of medulla oblongata correctly. 6. At the end of session the phase 1 student must be able to discuss the development of medulla oblongata accurately. 7. At the end of session the phase 1 student must be able to enumerate the development of pons correctly. 8. At the end of session the phase 1 student must be able to discuss the development of pons accurately. 9. At the end of session the phase 1 student must be able to enumerate the development of midrain correctly. 10. At the end of session the phase 1 student must be able to discuss the development of midbrain accurately.	K	KH	Y	Lecture	Written/ Viva voce			

	11. At the end of session the phase 1 student must be able to enumerate the development of cerebral hemisphere correctly. 12. At the end of session the phase 1 student must be able to discuss the clinical implication of development of cerebral hemisphere accurately. 13. At the end of session the phase 1 student must be able to enumerate the development of cerebellum correctly. 14. At the end of session the phase 1 student must be able to discuss the clinical implication of development of cerebellum accurately.								
AN64.3	**Describe various types of open neural tube defects with its embryological basis** **Objectives** 1. At the end of session the phase 1 student must be able to explain the various types of open neural tube defects accurately. 2. At the end of session the phase 1 student must be able to explain the embryological basis of various types of open neural tube defects accurately.	K	KH	N	Lecture	Written/ Viva voce		Obstetrics & Gynaecology, Pediatrics	
Topic:Epitheliumhistology		**Number ofcompetencies:(2)**				**Number of competencies for certification:(01)**			
AN65.1	**Identify epithelium under the microscope & describe the various types that correlate to its function** **Objectives** 1. At the end of session the phase 1 student must be able to describe the epithelium correctly. 2. At the end of session the phase 1 student must be able to describe the various types of epithelium correctly. 3. At the end of session the phase 1 student must be able to differentiate the various types of epithelium correctly. 4. At the end of session the phase 1 student must be able to identify the features of epithelium under the microscope correctly. 5. At the end of session the phase 1 student must be able to demonstrate the features of epithelium under the microscope correctly 6. At the end of session the phase 1 student must be able to discuss the functions of different type of epithelium accurately. 7. At the end of session the phase 1 student must be able to list the examples of various types of epithelium correctly.	K/S	P	Y	Lecture, Practical	Written/ skill assessment	1		
AN65.2	**Describe the ultrastructure of epithelium** **Objectives** 1. At the end of session the phase 1 student should be able to explain the ultrastructure of epithelium correctly 2. At the end of session the phase 1 student should be able to discuss the ultrastructure of epithelium correctly.	K	KH	N	Lecture, Practical	Written			

Topic: Connectivetissuehistology		Number ofcompetencies:(2)			Number of procedures for certification:(NIL)				
AN66.1	**Describe & identify various types of connective tissue with functional correlation** **Objectives** 1. At the end of session the phase 1 student must be able to define the connective tissue accurately. 2. At the end of session the phase 1 student must be able to describe the various type of connective tissue correctly. 3. At the end of session the phase 1 student must be able to describe the functional correlation of various type of connective tissue correctly. 4. At the end of session the phase 1 student must be able to identify the various type of connective tissue correctly. 5. At the end of session the phase 1 student must be able to draw the diagram of various type of connective tissue correctly.	K/S	SH	Y	Lecture, Practical	Written/ skill assessment			Physiology
AN66.2	**Describe the ultrastructure of connective tissue** **objectives** 1. At the end of session the phase 1 student should be able to explain the ultrastructure of connective tissue accurately. 2. At the end of session the phase 1 student should be able to discuss the ultrastructure of connective tissue accurately.	K	KH	N	Lecture, Practical	Written		Pathology	
Topic: Musclehistology		**Number ofcompetencies:(3)**			**Number of procedures for certification:(NIL)**				
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN67.1	**Describe & identify various types of muscle under the microscope** **Objectives:** 1. At the end of session the phase I student must be able to describe the muscular tissue correctly 2. At the end of session the phase I student must be able to identify the muscular tissue correctly. 3. At the end of session the phase I student must be able to draw the muscular tissue correctly	K/S	SH	Y	Lecture, Practical	Written/ skill assessment			
AN67.2	**Classify muscle and describe the structure-function correlation of the Same** **Objectives:** 1.At the end of session the phase I student must be able to describe the muscular tissue correctly 2. At the end of session the phase I student must be able to classify the muscular tissue correctly. 3. At the end of session the phase I student must be able to elicit the	K	KH	Y	Lecture, Practical	Written			Physiology

	features of different types of muscular tissue correctly. 4. At the end of session the phase I student must be able to describe the functions of different types of muscular tissue according to structure correctly.								
AN67.3	**Describe the ultrastructure of muscular tissue** **Objectives:** 1.At the end of session the phase I student should be able to describe the ultrastructure of muscular tissue correctly. 2. At the end of session the phase I student should be able to describe the features of ultrastructure of different types of muscular tissue correctly.	K	KH	N	Lecture, Practical	Written			
Topic: Nervoustissuehistology		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN68.1	**Describe & Identify multipolar & unipolar neuron, ganglia, peripheral nerve** **Objectives:** 1. At the end of session the phase I student must be able to describe the neurons correctly. 2. At the end of session the phase I student must be able to enumerate different types of neurons correctly. 3. At the end of session the phase I student must be able to describe the ganglia correctly. 4 .At the end of session the phase I student must be able to describe the ganglia correctly. 5. At the end of session the phase I student must be able to describe the peripheral nerve correctly. 6. At the end of session the phase I student must be able to identify the neurons correctly. 7. At the end of session the phase I student must be able to identify the ganglia correctly. 8.. At the end of session the phase I student must be able to identify the peripheral nerve correctly. 9. At the end of session the phase I student must be able to draw the neurons correctly. 10. At the end of session the phase I student must be able to draw the ganglia correctly. 11. At the end of session the phase I student must be able to draw the peripheral nerve correctly.	K/S	SH	Y	Lecture, Practical	Written/ skill assessment			
AN68.2	**Describe the structure-function correlation of neuron** 1. At the end of session the phase I student must be able to describe the structure of neuron according to functions accurately.	K	KH	Y	Lecture, Practical	Written			Physiology
AN68.3	**Describe the ultrastructure of nervous tissue** **Objectives:** 1. At the end of session the phase I student must be able to describe the ultrastructure of nervous tissue accurately. 2. At the end of session the phase I student must be able to identify the ultrastructure of nervous tissue accurately.	K	KH	N	Lecture, Practical	Written			

	3. At the end of session the phase I student must be able to draw the ultrastructure of nervous tissue accurately.								
Topic:BloodVessels		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN69.1	**Identify elastic & muscular blood vessels, capillaries under the microscope** **Objectives:** 1. At the end of session the phase I student must be able to describe the blood vessel accurately. 2. At the end of session the phase I student must be able to classify different types of blood vessel accurately. 3. At the end of session the phase I student must be able to describe the capillary accurately. 4. At the end of session the phase I student must be able to identify the blood vessel accurately. 5. At the end of session the phase I student must be able to identify different types of blood vessel accurately. 6. At the end of session the phase I student must be able to identify the capillary accurately. 7. At the end of session the phase I student must be able to draw different blood vessel accurately. 8. At the end of session the phase I student must be able to draw the capillary accurately.	K/S	SH	Y	Lecture, Practical	Skill assessment			
AN69.2	**Describe the various types and structure-function correlation of blood vessel** **Objectives:** 1. At the end of session the phase I student must be able to describe the structure of neuron according to functions accurately.	K	KH	Y	Lecture, Practical	Written			Physiology
AN69.3	**Describe the ultrastructure of blood vessels** **Objectives:** 1. At the end of session the phase I student must be able to describe the ultrastructure of blood vessels accurately. 2. At the end of session the phase I student must be able to identify the ultrastructure of blood vessels accurately. 3. At the end of session the phase I student must be able to draw the ultrastructure of blood vessels accurately	K	KH	Y	Lecture, Practical	Written			
Topic: Glands &Lymphoidtissue		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			
AN70.1	**Identify exocrine gland under the microscope & distinguish between serous, mucous and mixed acini** **Objectives**: 1. At the end of session the phase I student must be able to describe the exocrine glands accurately 2. At the end of session the phase I student must be able to differentiate between different types ofexocrine glands accurately	K/S	SH	Y	Lecture, Practical	Written/ skill assessment		Pathology	

	3. At the end of session the phase I student must be able to identify serous acini accurately. 4. At the end of session the phase I student must be able to identify mucous acini accurately. 5. At the end of session the phase I student must be able to identify mixed acini accurately. 6. At the end of session the phase I student must be able to draw serous acini accurately. 7. At the end of session the phase I student must be able to draw mucous acini accurately. 8. At the end of session the phase I student must be able to draw mixed acini accurately.								
AN70.2	**Identify the lymphoid tissue under the microscope & describe microanatomy of lymph node, spleen, thymus, tonsil and correlate the structure with function** **Objectives:** 1. At the end of session the phase I student must be able to describe the lymphoid tissue accurately. 2. At the end of session the phase I student must be able to enumerate different lymphoid tissues accurately. 3. At the end of session the phase I student must be able to describe the microanatomy of lymph node accurately. 4. At the end of session the phase I student must be able to describe the microanatomy of spleen accurately. 5. At the end of session the phase I student must be able to describe the microanatomy of thymus accurately. 6. At the end of session the phase I student must be able to describe the microanatomy of tonsil accurately. 7. At the end of session the phase I student must be able to identify microanatomy of lymph node accurately. 8. At the end of session the phase I student must be able to identify the microanatomy of spleen accurately. 9. At the end of session the phase I student must be able to identify the microanatomy of thymus accurately. 10. At the end of session the phase I student must be able to identify the microanatomy of tonsil accurately. 11. At the end of session the phase I student must be able to draw microanatomy of lymph node accurately. 12. At the end of session the phase I student must be able to draw the microanatomy of spleen accurately. 13. At the end of session the phase I student must be able to draw the microanatomy of thymus accurately. 14. At the end of session the phase I student must be able to draw the microanatomy of tonsil accurately.	K/S	SH	Y	Lecture, Practical	Written/ skill assessment		Pathology	
Topic: Bone&Cartilage		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN71.1	**Identify bone under the microscope; classify various types and describe the structure-function correlation of the same** **OBJECTIVES** 1. At the end of the session the phase I student must be able to list the microscopic features of bone correctly 2. At the end of the session the phase I student must be able to classify various types of bones accurately 3. At the end of the session the phase I student must be able to describe the structure of bone correctly 4. At the end of the session the phase I student must be able to identify the slides of bone under microscope correctly 5. At the end of the session the phase I student must be able to enumerate the differences between 2 types of bones correctly	K/S	SH	Y	Lecture, Practical	Written/ skill assessment		Pathology	
AN71.2	**Identify cartilage under the microscope & describe various types and structure- function correlation of the same** **OBJECTIVES** 1. At the end of the session the phase I student must be able to list the microscopic features of cartilage correctly 2. At the end of the session the phase I student must be able to classify various types of cartilage accurately 3. At the end of the session the phase I student must be able to describe the structure of cartilage correctly 4. At the end of the session the phase I student must be able to identify the slides of cartilage under microscope correctly 5. At the end of the session the phase I student must be able to enumerate the differences between 3 types of cartilage correctly	K/S	SH	Y	Lecture, Practical	Written/ skill assessment		Pathology	
Topic: Integumentary System		**Number ofcompetencies:(1)**				**Number of procedures for certification:(NIL)**			
AN72.1	**Identify the skin and its appendages under the microscope and correlate the structure with function** **OBJECTIVES** 1. At the end of the session the phase I student must be able to list the microscopic features of skin with its appendages correctly 2. At the end of the session the phase I student must be able to enumerate various function of skin with its appendages accurately 3. At the end of the session the phase I student must be able to describe the structure of skin with its appendages correctly	K/S	SH	Y	Lecture, Practical	Written/ skill assessment			

	4. At the end of the session the phase I student must be able to identify the slides of skin with its appendages under microscope correctly 5. At the end of the session the phase I student must be able to enumerate the differences between 2 types of skin correctly								
Topic:Chromosomes		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN73.1	**Describe the structure of chromosomes with classification** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define the chromosomes accurately 2. At the end of the session the phase I student must be able to describe the structure of chromosomes correctly 3. At the end of the session the phase I student must be able to classify the chromosomes correctly	K	KH	Y	Lecture	Written			
AN73.2	**Describe technique of karyotyping with its applications** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define karyotyping accurately 2. At the end of the session the phase I student must be able to describe technique of karyotyping correctly 3. At the end of the session the phase I student must be able to list the application of karyotyping correctly	K	KH	Y	Lecture	Written			
AN73.3	**Describe the Lyon's hypothesis** **OBJECTIVES** 1. At the end of the session the phase I student must be able to describe the Lyon's hypothesis accurately 2. At the end of the session the phase I student must be able to list the application of Lyon's hypothesis correctly 3. At the end of the session the phase I student must be able to discuss the conclusion of Lyon's hypothesis accurately	K	KH	Y	Lecture	Written			
Topic: PatternsofInheritance		**Number ofcompetencies:(4)**				**Number of procedures for certification:(NIL)**			
AN74.1	**Describe the various modes of inheritance with examples** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define inheritance accurately 2. At the end of the session the phase I student must be able to describe the various modes of inheritance correctly 3. At the end of the session the phase I student must be able to enumerate examples of various modes of inheritance correctly	K	KH	Y	Lecture	Written		General Medicine, Pediatrics	
AN74.2	**Draw pedigree charts for the various types of inheritance & give examples of diseases of each mode of inheritance** **OBJECTIVES** 1. At the end of the session the phase I student must be able to draw pedigree charts for the various types of inheritance correctly	K	KH	Y	Lecture	Written		General Medicine, Pediatrics	

	2. At the end of the session the phase I student must be able to enumerate examples of diseases of each mode of inheritance correctly								
AN74.3	**Describe multifactorial inheritance with examples** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define multifactorial inheritance accurately 2. At the end of the session the phase I student must be able to describe multifactorial inheritance correctly 3. At the end of the session the phase I student must be able to enumerate examples of multifactorial inheritance correctly	K	KH	Y	Lecture	Written		General Medicine	
AN74.4	**Describe the genetic basis & clinical features of Achondroplasia, Cystic Fibrosis, Vitamin D resistant rickets, Haemophilia, Duchene's muscular dystrophy & Sickle cell anaemia** **OBJECTIVES** 1. At the end of the session the phase I student should be able to define Achondroplasia accurately 2. At the end of the session the phase I student should be able to describe the genetic basis of Achondroplasia correctly 3. At the end of the session the phase I student should be able to enumerate the clinical features of Achondroplasia correctly 4. At the end of the session the phase I student should be able to define Cystic Fibrosis accurately 5. At the end of the session the phase I student should be able to describe the genetic basis of Cystic Fibrosis correctly 6. At the end of the session the phase I student should be able to enumerate the clinical features of Cystic Fibrosis correctly 7. At the end of the session the phase I student should be able to define Vitamin D resistant rickets accurately 8. At the end of the session the phase I student should be able to describe the genetic basis of Vitamin D resistant rickets correctly 9. At the end of the session the phase I student should be able to enumerate the clinical features of Vitamin D resistant rickets correctly 10. At the end of the session the phase I student should be able to define Haemophilia accurately 11. At the end of the session the phase I student should be able to describe the genetic basis of Haemophilia correctly 12. At the end of the session the phase I student should be able to enumerate the clinical features of Haemophilia correctly 13. At the end of the session the phase I student should be able to define Duchene's muscular dystrophy accurately 14. At the end of the session the phase I student should be able to describe the genetic basis of Duchene's muscular dystrophy correctly 15. At the end of the session the phase I student should be able to enumerate the clinical features of Duchene's muscular dystrophy correctly 16. At the end of the session the phase I student should be able to define Sickle cell anaemia accurately	K	KH	N	Lecture	Written		General Medicine, Pediatrics	

	17. At the end of the session the phase I student should be able to describe the genetic basis of Sickle cell anaemia correctly 18. At the end of the session the phase I student should be able to enumerate the clinical features of Sickle cell anaemia correctly								

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
TTopic: Principle of Genetics, Chromosomal Aberrations & Clinical Genetics		**Number of competencies: (5)**				**Number of procedures for certification: (NIL)**			
AN75.1	**Describe the structural and numerical chromosomal aberrations** **OBJECTIVES** 1. At the end of the session the phase I student must be able to describe the structural chromosomal aberrations correctly 2. At the end of the session the phase I student must be able to enumerate structural chromosomal aberrations correctly 3. At the end of the session the phase I student must be able to describe the numerical chromosomal aberrations correctly 4. At the end of the session the phase I student must be able to enumerate numerical chromosomal aberrations correctly	K	KH	Y	Lecture	Written		Pediatrics	
AN75.2	**Explain the terms mosaics and chimeras with example** **OBJECTIVES** 1. At the end of the session the phase I student should be able to define mosaics accurately 2. At the end of the session the phase I student should be able to enumerate examples of mosaics correctly 3. At the end of the session the phase I student should be able to define chimeras accurately 4. At the end of the session the phase I student should be able to enumerate examples of chimeras correctly	K	KH	N	Lecture	Written		Pediatrics	
AN75.3	**Describe the genetic basis & clinical features of Prader Willi syndrome, Edward syndrome & Patau syndrome** **OBJECTIVES** 1. At the end of the session the phase I student should be able to describe the genetic basis of Prader Willi syndrome correctly 2. At the end of the session the phase I student should be able to enumerate the clinical features of Prader Willi syndrome correctly 3. At the end of the session the phase I student should be able to describe the genetic basis of Edward syndrome correctly 4. At the end of the session the phase I student should be able to enumerate the clinical features of Edward syndrome correctly 5. At the end of the session the phase I student should be able to describe the genetic basis of Patau syndrome correctly	K	KH	N	Lecture	Written		Pediatrics	

	6. At the end of the session the phase I student should be able to enumerate the clinical features of Patau syndrome correctly								
AN75.4	**Describe genetic basis of variation: polymorphism and mutation** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define polymorphism accurately 2. At the end of the session the phase I student must be able to describe genetic basis of polymorphism correctly 3. At the end of the session the phase I student must be able to classify polymorphism accurately 4. At the end of the session the phase I student must be able to enumerate examples of polymorphism correctly 5. At the end of the session the phase I student must be able to define mutation accurately 6. At the end of the session the phase I student must be able to describe genetic basis of mutation correctly 7. At the end of the session the phase I student must be able to classify mutation accurately 8. At the end of the session the phase I student must be able to enumerate examples of mutation correctly	K	KH	Y	Lecture	Written		Pediatrics	
AN75.5	**Describe the principles of genetic counselling** **OBJECTIVES** 1. At the end of the session the phase I student must be able to describe the principles of genetic counselling correctly 2. At the end of the session the phase I student must be able to enumerate the application of genetic counselling correctly 3. At the end of the session the phase I student must be able to discuss the significance of genetic counselling correctly	K	KH	Y	Lecture	Written		Pediatrics, Obstetrics & Gynaecology	
Topic: Introductiontoembryology		**Number ofcompetencies:(2)**				**Number of procedures for certification:(NIL)**			
AN76.1	**Describe the stages of human life** **OBJECTIVES** 1. At the end of the session the phase I student must be able to enumerate the stages of human life correctly 2. At the end of the session the phase I student must be able to describe the stages of human life correctly 3. At the end of the session the phase I student must be able to differentiate between the stages of human life accurately	K	KH	Y	Lecture	Written			
AN76.2	**Explain the terms- phylogeny, ontogeny, trimester, viability** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define phylogeny accurately 2. At the end of the session the phase I student must be able to explain phylogeny correctly 3. At the end of the session the phase I student must be able to define	K	KH	Y	Lecture	written			

	ontogeny accurately 4. At the end of the session the phase I student must be able to explain ontogeny correctly 5. At the end of the session the phase I student must be able to define trimester accurately 6. At the end of the session the phase I student must be able to explain trimester correctly 7. At the end of the session the phase I student must be able to define viability accurately 8. At the end of the session the phase I student must be able to explain viability correctly								
Topic: Gametogenesisandfertilization		**Number ofcompetencies:(6)**				**Number of procedures for certification:(NIL)**			
AN77.1	**Describe the uterine changes occurring during the menstrual cycle** **OBJECTIVES** 1. At the end of the session the phase I student must be able to describe the menstrual cycle correctly 2. At the end of the session the phase I student must be able to enumerate the uterine changes occurring during the menstrual cycle accurately 3. At the end of the session the phase I student must be able to explain the uterine changes occurring during the menstrual cycle correctly 4. At the end of the session the phase I student must be able to discuss the role of hormones during the menstrual cycle correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN77.2	**Describe the synchrony between the ovarian and menstrual cycles** **OBJECTIVES** 1. At the end of the session the phase I student must be able to describe the ovarian cycle correctly 2. At the end of the session the phase I student must be able to explain the synchrony between the ovarian and menstrual cycles accurately	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN77.3	**Describe spermatogenesis and oogenesis along with diagrams** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define the spermatogenesis accurately 2. At the end of the session the phase I student must be able to describe the spermatogenesis along with diagrams correctly 3. At the end of the session the phase I student must be able to define the oogenesis accurately 4. At the end of the session the phase I student must be able to describe the oogenesis along with diagrams correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN77.4	**Describe the stages and consequences of fertilization** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define the fertilization accurately 2. At the end of the session the phase I student must be able to describe the stages of fertilization correctly 3. At the end of the session the phase I student must be able to explain the	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	

	consequences of fertilization correctly								
Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
AN77.5	**Enumerate and describe the anatomical principles underlying contraception** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define contraception accurately 2. At the end of the session the phase I student must be able to describe the anatomical principles underlying contraception correctly 3. At the end of the session the phase I student must be able to enumerate the methods of contraception correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN77.6	**Describe teratogenic influences; fertility and sterility, surrogate motherhood, social significance of "sex-ratio".** **OBJECTIVES** 1. At the end of the session the phase I student should be able to define teratogenicity accurately 2. At the end of the session the phase I student should be able to describe teratogenic influences correctly 3. At the end of the session the phase I student should be able to enumerate teratogenic agents correctly 4. At the end of the session the phase I student should be able to define fertility accurately 5. At the end of the session the phase I student should be able to define sterility accurately 6. At the end of the session the phase I student should be able to define surrogacy accurately 7. At the end of the session the phase I student should be able to describe the surrogate motherhood correctly 8. At the end of the session the phase I student should be able to enumerate the limitation of surrogacy correctly 9. At the end of the session the phase I student should be able to explain the method of surrogacy correctly 10. At the end of the session the phase I student should be able to describe the "sex-ratio accurately 11. At the end of the session the phase I student should be able to discuss the social significance of "sex-ratio correctly	K	KH	N	Lecture	Written		Obstetrics & Gynaecology	
Topic: Second weekofdevelopment			**Number ofcompetencies:(5)**			**Number of procedures for certification:(NIL)**			

AN78.1	**Describe cleavage and formation of blastocyst** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define cleavage accurately 2. At the end of the session the phase I student must be able to describe cleavage correctly 3. At the end of the session the phase I student must be able to draw a well labelled diagram of cleavage correctly 4. At the end of the session the phase I student must be able to define blastocyst accurately 5. At the end of the session the phase I student must be able to describe formation of blastocyst correctly 6. At the end of the session the phase I student must be able to draw a well labelled diagram of blastocyst correctly	K	KH	Y	Lecture	Written			
AN78.2	**Describe the development of trophoblast** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define trophoblast accurately 2. At the end of the session the phase I student must be able to describe the development of trophoblast correctly 3. At the end of the session the phase I student must be able to draw a well labelled diagram of trophoblast correctly	K	KH	Y	Lecture	Written			
AN78.3	**Describe the process of implantation & common abnormal sites of implantation** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define implantation accurately 2. At the end of the session the phase I student must be able to describe the process of implantation with diagram correctly 3. At the end of the session the phase I student must be able to enumerate common abnormal sites of implantation correctly 4. At the end of the session the phase I student must be able to discuss clinical implication of abnormal sites of implantation correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN78.4	**Describe the formation of extra-embryonic mesoderm and coelom, bilaminar disc and prochordal plate** **OBJECTIVES** 1. At the end of the session the phase I student must be able to enumerate events taking place during Second weekofdevelopment accurately 2. At the end of the session the phase I student must be able to describe the formation of extra-embryonic mesoderm correctly 3. At the end of the session the phase I student must be able to describe the formation of extra-embryonic coelom wit with diagram correctly 4. At the end of the session the phase I student must be able to describe the formation of bilaminar disc with diagram correctly 5. At the end of the session the phase I student must be able to describe the formation of prochordal plate with diagram correctly	K	KH	Y	Lecture	Written			

AN78.5	**Describe in brief abortion; decidual reaction, pregnancy test** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define abortion accurately 2. At the end of the session the phase I student must be able to describe abortion correctly 3. At the end of the session the phase I student must be able to describe decidual reaction correctly 4. At the end of the session the phase I student must be able to describe pregnancy test correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
Topic: 3rd to 8th weekofdevelopment		**Number ofcompetencies:(6)**				**Number of procedures for certification:(NIL)**			
AN79.1	**Describe the formation & fate of the primitive streak** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define primitive streak accurately 2. At the end of the session the phase I student must be able to describe the formation of primitive streak correctly 3. At the end of the session the phase I student must be able to explain the fate of the primitive streak correctly	K	KH	Y	Lecture	Written			
AN79.2	**Describe formation & fate of notochord** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define notochord accurately 2. At the end of the session the phase I student must be able to describe the formation of notochord correctly 3. At the end of the session the phase I student must be able to explain the fate of the notochord correctly	K	KH	Y	Lecture	Written			
AN79.3	**Describe the process of neurulation** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define neurulation accurately 2. At the end of the session the phase I student must be able to describe the process of neurulation correctly	K	KH	Y	Lecture	Written			
AN79.4	**Describe the development of somites and intra-embryonic coelom** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define somites accurately 2. At the end of the session the phase I student must be able to describe the development of somites correctly 3. At the end of the session the phase I student must be able to discuss the fate of somites correctly 4. At the end of the session the phase I student must be able to describe the development of intra-embryonic coelom correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	

AN79.5	**Explain embryological basis of congenital malformations, nucleus pulposus, sacrococcygeal teratomas, neural tube defects** **OBJECTIVES** 1. At the end of the session the phase I student should be able to enumerate congenital malformations accurately 2. At the end of the session the phase I student should be able to describe embryological basis of congenital malformations correctly 3. At the end of the session the phase I student must be able to discuss clinical implication of congenital malformations correctly 4. At the end of the session the phase I student should be able to describe embryological basis of nucleus pulposus correctly 5. At the end of the session the phase I student should be able to describe embryological basis of sacrococcygeal teratomas correctly 6. At the end of the session the phase I student must be able to discuss clinical implication of sacrococcygeal teratomas correctly 7. At the end of the session the phase I student should be able to enumerate neural tube defects accurately 8. At the end of the session the phase I student should be able to describe embryological basis of neural tube defects correctly 9. At the end of the session the phase I student must be able to discuss clinical implication of neural tube defects correctly	K	KH	N	Lecture	Written		Obstetrics & Gynaecology	
AN79.6	**Describe the diagnosis of pregnancy in first trimester and role of teratogens, alpha-fetoprotein** **OBJECTIVES** 1. At the end of the session the phase I student should be able to enumerate diagnostic features of pregnancy in first trimester accurately 2. At the end of the session the phase I student should be able to describe role of teratogens correctly 3. At the end of the session the phase I student should be able to describe alpha-fetoprotein correctly 4. At the end of the session the phase I student should be able to explain clinical significance of alpha-fetoprotein correctly	K	KH	N	Lecture	Written		Obstetrics & Gynaecology	

Number	**COMPETENCY** **The student should be able to**	**Domain K/S/A/C**	**Level K/KH/ SH/P**	**Core (Y/N)**	**Teaching-Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
Topic:Fetalmembranes		**Number ofcompetencies:(7)**				**Number of procedures for certification:(NIL)**			
AN80.1	**Describe formation, functions & fate of-chorion: amnion; yolk sac; allantois & decidua** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define	K	KH	Y	Lecture	Written			

	chorion accurately 2. At the end of the session the phase I student must be able to describe formation of chorion correctly 3. At the end of the session the phase I student must be able to enumerate function of chorion correctly 4. At the end of the session the phase I student must be able to explain fate of chorion correctly 5. At the end of the session the phase I student must be able to define amnion accurately 6. At the end of the session the phase I student must be able to describe formation of amnion correctly 7. At the end of the session the phase I student must be able to enumerate function of amnion correctly 8. At the end of the session the phase I student must be able to explain fate of amnion correctly 9. At the end of the session the phase I student must be able to define yolk sac accurately 10. At the end of the session the phase I student must be able to describe formation of yolk sac correctly 11. At the end of the session the phase I student must be able to enumerate function of yolk sac correctly 12. At the end of the session the phase I student must be able to explain fate of yolk sac correctly 13. At the end of the session the phase I student must be able to define allantois accurately 14. At the end of the session the phase I student must be able to describe formation of allantois correctly 15. At the end of the session the phase I student must be able to enumerate function of allantois correctly 16. At the end of the session the phase I student must be able to explain fate of allantois correctly 17. At the end of the session the phase I student must be able to define decidua accurately 18. At the end of the session the phase I student must be able to describe formation of decidua correctly 19. At the end of the session the phase I student must be able to enumerate function of decidua correctly 20. At the end of the session the phase I student must be able to explain fate of decidua correctly								
AN80.2	**Describe formation & structure of umbilical cord** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define umbilical cord accurately 2. At the end of the session the phase I student must be able to describe formation of umbilical cord correctly 3. At the end of the session the phase I student must be able to describe structure of umbilical cord correctly	K	KH	Y	Lecture	Written			

	4. At the end of the session the phase I student must be able to enumerate function of umbilical cord correctly 5. At the end of the session the phase I student must be able to explain fate of umbilical cord correctly								
AN80.3	**Describe formation of placenta, its physiological functions, foetomaternal circulation & placental barrier** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define placenta accurately 2. At the end of the session the phase I student must be able to describe formation of placenta correctly 3. At the end of the session the phase I student must be able to list physiological functions of placenta correctly 4. At the end of the session the phase I student must be able to explain clinical significance of placenta correctly 5. At the end of the session the phase I student must be able to describe foetomaternal circulation correctly 6. At the end of the session the phase I student must be able to explain clinical implications of foetomaternal circulation correctly 7. At the end of the session the phase I student must be able to describe placental barrier correctly 8. At the end of the session the phase I student must be able to explain significance of placental barrier correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN80.4	**Describe embryological basis of twinning in monozygotic & dizygotic twins** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define monozygotic twins accurately 2. At the end of the session the phase I student must be able to describe embryological basis of twinning in monozygotic twins correctly 3. At the end of the session the phase I student must be able to define dizygotic twins accurately 4. At the end of the session the phase I student must be able to describe embryological basis of twinning in dizygotic twins correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN80.5	**Describe role of placental hormones in uterine growth & parturition** **OBJECTIVES** 1. At the end of the session the phase I student must be able to list placental hormones with its functions accurately 2. At the end of the session the phase I student must be able to describe role of placental hormones in uterine growth correctly 3. At the end of the session the phase I student must be able to describe role of placental hormones in parturition correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN80.6	**Explain embryological basis of estimation of fetal age.** **OBJECTIVES** 1. At the end of the session the phase I student should be able to define fetal age accurately	K	KH	N	Lecture	Written		Obstetrics & Gynaecology	

	2. At the end of the session the phase I student should be able to enumerate methods of estimation of fetal age correctly 3. At the end of the session the phase I student should be able to explain embryological basis of estimation of fetal age correctly 4. At the end of the session the phase I student should be able to discuss the significance of estimation of fetal age correctly								
AN80.7	**Describe various types of umbilical cord attachments** **OBJECTIVES** 1. At the end of the session the phase I student should be able to describe various types of umbilical cord attachments correctly 2. At the end of the session the phase I student should be able to explain significance of umbilical cord attachments correctly	K	KH	N	Lecture	Written		Obstetrics & Gynaecology	
Topic:PrenatalDiagnosis		**Number ofcompetencies:(3)**				**Number of procedures for certification:(NIL)**			
AN81.1	**Describe various methods of prenatal diagnosis** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define prenatal diagnosis accurately 2. At the end of the session the phase I student must be able to describe various methods of prenatal diagnosis correctly 3. At the end of the session the phase I student must be able to significance of prenatal diagnosis correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN81.2	**Describe indications, process and disadvantages of amniocentesis** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define amniocentesis accurately 2. At the end of the session the phase I student must be able to indications of amniocentesis correctly 3. At the end of the session the phase I student must be able to process of amniocentesis correctly 4. At the end of the session the phase I student must be able to disadvantages of amniocentesis correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
AN81.3	**Describe indications, process and disadvantages of chorion villus biopsy** **OBJECTIVES** 1. At the end of the session the phase I student must be able to define chorion villus biopsy accurately 2. At the end of the session the phase I student must be able to indications of chorion villus biopsy correctly 3. At the end of the session the phase I student must be able to process of chorion villus biopsy correctly 4. At the end of the session the phase I student must be able to disadvantages of chorion villus biopsy correctly	K	KH	Y	Lecture	Written		Obstetrics & Gynaecology	
Topic: EthicsinAnatomy		**Number ofcompetencies:(1)**				**Number of procedures for certification:(NIL)**			

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/ SH/P	Core (Y/N)	Teaching-Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
AN 82.1	**Demonstrate respect and follow the correct procedure when handling cadavers and other biologic tissue** **OBJECTIVES** 1. At the end of the session the phase I student must be able to describe the correct procedure of handling cadavers accurately 2. At the end of the session the phase I student must be able to describe the correct procedure of handling biologic tissues accurately 3. At the end of the session the phase I student must be able to demonstrate the correct procedure of handling cadavers correctly 4. At the end of the session the phase I student must be able to demonstrate the correct procedure of handling biologic tissues correctly 5. At the end of the session the phase I student must be able to describe the ethical values when handling cadavers correctly 6. At the end of the session the phase I student must be able to show the ethical values when handling cadavers correctly	S	SH	Y	Group Activity	NIL		AETCOM	
	Column C: K- Knowledge, S – Skill, A - Attitude / professionalism, C- Communication. **Column D: K – Knows KH - Knows How, SH - Shows how, P- performs independently,** **Column F: DOAP session – Demonstrate, Observe, Assess, Perform.** **Column H: If entry is P: indicate how many procedures must be done independently for certification/ graduation**								