



TEERTHANKER MAHAVEER UNIVERSITY

(Established under Govt. of U. P. Act No. 30, 2008)

Delhi Road, Moradabad (U.P.)

SAMPLE QUESTION PAPER FOR TMU RESEARCH APTITUDE TEST IN ALLIED HEALTH SCIENCES

Max. Marks: 100

Time: 2.00 Hrs

Note:

1. The question paper is divided into two parts viz. Part-A and Part-B, carrying 50 marks each.
2. **Part-A** consists of 50 multiple choice questions carrying one mark each. All questions are compulsory. There shall be no negative marking. The answers are to be marked on the OMR sheet with black pencil.
3. **Part-B** consists of 8 descriptive type questions, out of which any 5 questions are to be answered, selecting any TWO questions from Section I and any THREE questions from Section II out of the opted Elective paper. Each question shall carry 10 marks. A candidate is expected to limit his answer in about 200 words for each question.

Part (A)

Total Marks: 50 X 1 = 50

- Q1. Who said that members of the same species are not alike?
- (a) Darwin
 - (b) Herbert Spencer
 - (c) Best
 - (d) Good
- Q2. A statistical measure based upon the entire population is called parameter while measure based upon a sample is known as
- (a) Sample parameter
 - (b) Inference
 - (c) Statistic
 - (d) None of these
- Q3. Generalized conclusion on the basis of a sample is technically known as
- (a) Statistical inference of external validity of the research
 - (b) Data analysis and interpretation
 - (c) Parameter inference
 - (d) All of the above
- Q4. A researcher selects a probability sample of 100 out of the total population. It is
- (a) A cluster sample
 - (b) A random sample
 - (c) A stratified sample
 - (d) A systematic sample
- Q5. A researcher divides the population into Postgraduates, graduates and 10+2 students and using the random digit table he selects some of them from each. This is technically called
- (a) stratified sampling
 - (b) stratified random sampling
 - (c) representative sampling
 - (d) none of these

Part (B)
Total Marks: 5 X 10 = 50

SECTION I

- Q.1 Write in brief about diffusion.
- Q.2 Discuss functions of cell membrane.
- Q.3 Write functions of blood.

SECTION II

(Choose any one elective paper from the following)

ELECTIVE-I (PHYSIOLOGY)

- Q.4 Describe ABO system of blood grouping. Add a note on blood transfusion.
- Q.5 Name the hormones of adrenal cortex. Describe the function, regulation and abnormalities of aldosterone hormone.
- Q.6 Define cardiac output and cardiac index. Describe the regulation and measurement of cardiac output.
- Q.7 Describe the neural regulation of respiration.
- Q.8 Describe the pathway of slow and fast pain.

ELECTIVE-II (PHARMACOLOGY)

- Q.4 Define a "Receptor". Discuss briefly the different types of receptors with suitable examples.
- Q.5 What is an "Adverse Drug Reaction". Describe in brief the various types of "ADR" with examples.
- Q.6 Classify Anti-Hypertensive Drugs. Discuss the merits and demerits of β -blockers.
- Q.7 What is Therapeutic Drug Monitoring and discuss its clinical significance.
- Q.8 What are the recent advances in the treatment of Diabetes Mellitus.

ELECTIVE-III (ANATOMY)

- Q.4 Describe course, relations & branches of distribution of oculomotor nerve.
- Q.5 Describe arches of foot along with its congenital & acquired anomalies.
- Q.6 Describe parotid gland under following heads:
- (a) Relations
 - (b) Nerve Supply
 - (c) Microscopic Anatomy
 - (d) Applied Significance
- Q.7 Describe urinary bladder under following heads:
- (a) Relations
 - (b) Nerve Supply
 - (c) Microscopic Anatomy
- Q.8 Describe Internal capsule along with its blood supply and applied significance.

ELECTIVE-IV (MICROBIOLOGY)

- Q.4 Name different species of spirochaetes and disease caused by them. Describe the laboratory diagnosis of syphilis.
- Q.5 Enumerate the agents causing sore throat. Describe the pathogenesis, laboratory diagnosis and prophylaxis of diphtheria.
- Q.6 Classify viruses. Discuss the various methods for isolation, cultivation and immunoprophylaxis for same.
- Q.7 Enumerate the hepatitis viruses. Describe the pathogenesis and laboratory diagnosis of hepatitis - B virus.
- Q.8 Enlist Leishmania Species causing human disease. Describe the pathogenesis and laboratory diagnosis of Kala-azar.

ELECTIVE-V (BIOCHEMISTRY)

- Q.4 Describe types, characteristics and metabolism of lipoproteins. Add a note on lipoprotein disorders.
- Q.5 Give an account of glycogenesis and glycogenolysis . Also explain their regulation.
- Q.6 Discuss in detail ammonia detoxification in human body. Also explain how ammonia detoxification in brain is different from rest of the body.
- Q.7 Describe protein synthesis (translation) along with post-translational modifications. List the inhibitors of translation.
- Q.8 Classify jaundice. Give an account of the biochemical tests which help in differentiating the types of jaundice.

Caution: Please note that the questions appearing above in this sample paper are only for the guidance of the candidates.