TEERTHANKER MAHAVEER UNIVERSITY

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

SAMPLE QUESTION PAPER FOR RESEARCH APTITUDE TEST IN AGRICULTURE

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. 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

4. Which of the following is a renewable source of energy?
   a) Coal
   b) Petroleum
   c) Solar energy
   d) Natural gas

5. Which of the following organizations is primarily responsible for space research in India?
   a) CSIR
   b) ISRO
   c) ICAR
   d) DRDO

6. What is the full form of ICT in research?
   a) Information and Communication Technology
   b) International Computer Technology
   c) Indian Communication Trends
   d) Integrated Computational Theory

4. Which of the following is NOT a type of research?
   a) Experimental Research
   b) Historical Research
   c) Logical Research

d) Descriptive Research

5. Which statistical measure is used to find the middle value in a dataset when arranged in ascending order?
   a) Mean
   b) Mode
   c) Median
   d) Standard Deviation

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

1. Explain the concept of crop adaptation and discuss the impact of climate shifts on agricultural productivity.
2. Discuss the principles and methods of integrated weed management, including the role of GM crops in weed control.
3. Explain the concept of slow-release fertilizers and nitrification inhibitors, and their role in improving soil fertility.
4. Describe various drought management strategies used in dry land agriculture and their significance in ensuring crop productivity.
5. Explain the agronomic practices for the cultivation of sugarcane, including soil and water management, fertilizer application, and weed control.
6. Discuss the major historical developments in plant pathology, focusing on significant epidemics and their impact on agriculture.
7. Describe the molecular mechanisms of plant pathogenesis, including the role of elicitors, recognition phenomenon, and defense mechanisms.
8. Explain the principles of integrated disease management, including cultural, biological, and chemical control measures.
9. Describe the factors influencing soil formation and the role of pedogenic processes in soil development.
10. Explain the significance of soil physical properties such as texture, structure, and porosity in influencing plant growth and soil fertility.

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