PG Even Semester Examination, May 2025

ECOLOGY & ENVIRONMENTAL SCIENCE

4th Semester

Course No. : ECGCC - 652

(Soil, Microbial and Agricultural Ecology)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

(Answer any five questions, selecting one from each unit)

Unit - I

1. What is soil physics? Discuss the importance of studying soil compaction, soil texture and soil structure. 2+12=14

2. Write short notes on : 7x2=14
   a) Soil organic matter
   b) Principles of conservation agriculture

Unit - II

3. Define mycorrhiza. Explain elaborately the types of

mycorrhizae. Write a note on the nutritional significance of mycorrhizae. 2+8+4=14

4. Write short notes on : 7x2=14
   a) Rhizosphere of plant roots
   b) Phosphate solubilising bacteria as biofertilizer

Unit - III

5. Discuss briefly about the disease cycle in plant. Write how environment negatively favours growth of pathogens that lead to diseases in plants. 7+7=14

6. Write short notes on : 7x2=14
   a) Antibiosis
   b) Exploitation and lysis

Unit - IV

7. Define agroforestry systems. Mention the types of agroforestry systems. Explain how the agroforestry system can be useful in achieving related sustainable development goals. 2+5+7=14

8. Write short notes on : 7x2=14
   a) Green tea, Oclong tea and Black tea
   b) Genetically Modified Crops

Unit - V

9. Define polyphagous insect pests. Enumerate the bionomics of one polyphagous insects pest. Discuss its measures control. 1+8+5=14

10. Write short notes on : 7x2=14
    a) Ecobiology of insect pest
    b) Pests outbreak in agroecosystem

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