PG Even Semester Examination, May 2025

ECOLOGY & ENVIRONMENTAL SCIENCE

2nd Semester

Course No. : ECGCC - 553

(Soil, Microbial & 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 conservation agriculture? Explain the social, ecological and economic benefits associated with it. 3+11=14

2. Write short notes on : 7x2=14

   a) Soil formation processes

   b) Soil texture

Unit - II

3. Define rhizosphere. Describe the characteristics of

rhizosphere. Discuss briefly the function and influence of living organisms in plant roots. 2+6+6=14

4. Write short notes on : 7x2=14
   a) Biofertilizers
   b) Symbiotic nitrogen fixation in leguminous plants

Unit - III

5. Define plant disease. Discus s briefly the symptoms of plant diseases. Write a note on the biological control of plant pathogen. 2+6+6=14

6. Write short notes on : 7x2=14
   a) Antibiosis
   b) Phyllosphere

Unit - IV

7. Write the names of the agroecological zones of India. Characterize the agroecological zones of northeast India, mentioning their climatic conditions, length of growing periods and suitable crops. 6+8=14

8. Write short notes on : 7x2=14
   a) Major, minor and rare pests of tea in Barak Valley
   b) Management of weeds in tea agroecosystem

Unit - V

9. Define pests. Explain the different ways through which pests reduce yield of a crop. Discuss how pests cause, damage to agricultural crops by citing examples. 2+3+9=14

10. Write short notes on : 7x2=14
    a) Bionomics of red pumpkin beetle
    b) Biological control of pests

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