PG Odd Semester (CBCS) Exam., December—2016

ECOLOGY AND ENVIRONMENTAL SCIENCE

(1st Semester)

Course No. : ECG–102 (C)

(Population and Community Ecology)

Full Marks : 75

Pass Marks : 30

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. *(a)* What are the various forms of population growth? Explain citing suitable examples of each type. 10

(b) Write a short note on population age structure. 5

2. *(a)* Define biotic potential. Explain it with suitable examples. How is it linked with environmental resistance? Explain. 1+6+3=10

(b) Write a short note on carrying capacity. 5

UNIT—II

3. Define population interactions. Mention the names of various types of positive and negative population interactions. Give an account on mutualism with suitable examples. 2+3+10=15

4. Write short notes on the following : 5×3=15

(a) Allee's principle

(b) Protocooperation

(c) Predation

UNIT—III

5. Write an account on the quantitative and qualitative characters of a community citing suitable examples. 15

6. Write short notes on the following : 7½×2=15

(a) Ecological niche

(b) Diversity indices

UNIT—IV

7. Define succession. Describe its various types. Mention the various theories on succession. 2+3+10=15

8. Write short notes on the following : 7½×2=15

(a) 'r' and 'k' selection strategies

(b) Ecotone, edge effect and edge species

UNIT—V

9. Describe the characteristic features, structure and functions of desert ecosystem. Mention the ecological adaptation as seen in plants and animals. 9+6=15

10. Write short notes on the following : 7½×2=15

(a) Mangrove ecosystem

(b) Zonation and stratification of plants

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