This question paper contains 2 printed pages. *Your Roll No. .....*

Sl. No. of Ques. Paper : 1323 F-7
Unique Paper Code : 2161501
Name of Paper : Ecology and Phytogeography
Name of Course : B.Sc. (Hons.) Botany, Restructured (FYUP)
Semester : V
Duration : : 3 hours
Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt five questions in all. Question No. 1 is compulsory.
Attempt any four questions from the rest.
All parts of a qestion must be answered together.

1. (a) Give one word for the following (any *six*):

(i) An aerial root in plants growing in waterlogged soils

(ii) An instrument used to measure light intensity

(iii) The living place of an organism

(iv) Small organisms which feed on the dead bodies of other organisms

(v) Name an angiosperm growing as total root parasite

(vi) Pioneer colonizers in a hydrosere

(vii) An interaction in which one population is inhibited while the other is unaffected

(viii) A process of nutrient enrichment in water bodies. 6×1=6

(b) Define the following terms (any *six*):

(i) Standing state

(ii) Pedogenesis

(iii) Epilimnion

(iv) Keystone species

(v) Food Web

(vi) Biosphere

(vii) Ecological Efficiency

P. T. O.

(viii)Frequency $6 \times 1_{1/2} = 9$

2. Differentiate between (any *five*)

   (a) Natality and Mortality

   (b) Autogenic succession and Allogenic succession

   (c) Alluvial soil and Colluvial soil

   (d) Predator and Parasite

   (e) Halophytes and Heliophytes

   (f) Neoendemics and Palaeoendemics

   (g) Phanerophytes and Therophytes. $3 \times 5 = 15$

3. Write short notes on (any *three*):

   (a) Types of fire

   (b) Age pyramids

   (c) Good's theory of tolerance

   (d) Synthetic characters of plant communities

   (e) Tundra biome. $5 \times 3 = 15$

4. (a) Describe the various types of ecological pyramids. 6

   (b) Describe the influence of wind *or* light on plants. 5

   (c) Discuss the importance of organic matter in soil. 4

5. (a) Describe the sequence of processes occurring during pimary succession. 6

   (b) Explain the Y-shaped model of energy flow in an ecosystem. 5

   (c) What is an ecotone? Why is species diversity high in ecotone? 4

6. (a) Give a diagrammatic representation of a typical soil profile. Explain the difference between eluviation and illuviation. 6

   (b) Explain the cycling of phosphorus in an ecosystem. 5

   (c) Give a comparative account of Commensalism and Mutualism using suitable. 4