

This question paper contains 3 printed pages]

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S. No. of Question Paper : 752

Unique Paper Code : 216403

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Name of the Paper : Plant Ecology and Phytogeography (BTHT-406)

Name of the Course : B.Sc. (Hons.) Botany

Semester : IV

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 question must be answered together.

(a) Define the following terms (Attempt any six) :

6×1.5=9

- (i) Water table
- (ii) Standing state
- (iii) Ecological niche
- (iv) Ecosystem
- (v) Food chain
- (vi) Mutualism
- (vii) Aquifer
- (viii) Thermocline.

(b) Fill in the blanks (Attempt any six) :

6×1=6

- (i) The process of successful establishment of a species in a new area is.....

P.T.O.

- (ii) The transition area between two or more communities or biomes is.....
- (iii) The total water present in soil is.....
- (iv) Species on which one or more other important species are dependent for their food, reproduction and other requirements are .....
- (v) The process of breakdown of parent rock material by any agent into smaller particles is known as .....
- (vi) The functional levels of an organism in any food chain is.....
- (vii) An instrument used to measure light intensity is.....

2. Differentiate between the following (Attempt any *five*) : 5×3=15

- (i) Commensalism and Ammensalism
- (ii) Primary and Secondary Succession
- (iii) Alluvial soil and Eolian soil
- (iv) Pyramid of energy and Pyramid of biomass
- (v) Artificial ecosystem and Natural ecosystem
- (vi) Mor humus and Mull humus

3. Write short notes on the following (attempt any *three*) : 3×5=15

- (i) Harmful and beneficial effects of fire
- (ii) Forms of water in soil
- (iii) Ecological efficiency
- (iv) Age pyramids
- (v) Thermal stratification

4. Briefly discuss the following : 3×5=15
- (i) Analytical quantitative characters used to study a community.
  - (ii) The different layers of atmosphere and their significance.
  - (iii) Nitrogen cycle in the ecosystem.
5. (i) Discuss the various negative interactions among organisms with suitable examples. 8
- (ii) With the help of a diagram explain the various stages of Hydrarch succession. 7
6. (i) What is phytogeography ? Give an account on vegetation of Delhi. 8
- (ii) What is ecological niche ? Briefly discuss its various types. 5
- (iii) What is the difference between ecotype and ecad ? 2