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Your Roll No.....

938

B.Sc. (Hons.)/III

C

BOTANY—Paper VIII

(Plant Ecology and Environmental Management)

(Admissions of 2004 and onwards)

Time : 3 Hours

Maximum Marks : 38

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

Attempt *five* questions in all, including

Q. No. 1 which is compulsory.

Attempt all parts of a question together.

1. Define any *six* of the following : 1×6=6
- (i) Biosphere
 - (ii) Soil profile
 - (iii) Relative humidity
 - (iv) Mutualism
 - (v) Serotiny

P.T.O.

- (vi) Edge effect
 - (vii) Secondary productivity
 - (viii) Resource
 - (ix) Benthic Environment
 - (x) Endemic species.
2. Differentiate between any *four* of the following pairs : $2 \times 4 = 8$
- (i) Tundra Biome and Tropical Forest
 - (ii) Renewable and Non-renewable Resource
 - (iii) Sand and Clay
 - (iv) Sleet and Snow
 - (v) Colluvial and Alluvial Deposit
 - (vi) *r*-selection and *k*-selection.
3. Write short notes on any *four* of the following : $2 \times 4 = 8$
- (i) Thermal stratification
 - (ii) Bioindicators
 - (iii) Aquifer
 - (iv) Photochemical smog
 - (v) Global warming
 - (vi) Marine pollution.

4. (a) What is succession ? How does primary succession differ from secondary succession ? List the processes involved in the succession of plant communities.

1+2+1=4

- (b) Give a critical account of wind as a factor in ecology. 4

5. (a) Explain the flow of energy in an autotroph based ecosystem up to the third trophic level. 4

- (b) Expand the following abbreviations : $\frac{1}{2} \times 8 = 4$

(i) CITES

(ii) NBPGR

(iii) UNEP

(iv) WWF

(v) DNES

(vi) CPCB

(vii) NEERI

(viii) IUCN.

6. (a) What is age structure ? Describe the different types of age pyramids of populations. 1+3=4
- (b) Discuss various factors responsible for the present state of Delhi's environment. What steps have been/should be taken in future to solve the problems ? 4
7. (a) What do you understand by plant community ? Explain Raunkier's Biological Spectrum. 1+3=4
- (b) Justify the statement, "Radioactive waste is hazardous to ecosystem and needs proper management." 4