

Roll No.

Total No. of Questions : 9]

[Total No. of Printed Pages : 4

(2034)

UG (CBCS) Ist Year Annual Examination

2710

B.Sc. BOTANY

(Plant Ecology and Taxonomy)

(Core)

Paper : BOTA-102

Time : 3 Hours]

[Maximum Marks : 50

Note :- Attempt *five* questions in all. Q. No. 1 of Section A is compulsory. Attempt *one* question each from Sections B, C, D and E. Attempt all parts of a question together.

Section-A

(Compulsory Question)

1. Do as directed :

- (i) The study of life history, population dynamics, behavior, home range etc. of a species is called

.....

- (ii) General process of primary ecological succession begins with
- (a) Reaction (b) Invasion
(c) Competition (d) Nudation
- (iii) All dead, fresh organic matter fallen on the ground is called :
- (a) Humus (b) Litter
(c) Mull (d) Duff
- (iv) occurs in various forms such as drizzle, rain, snow, dew, frost, sleet and hail.
- (v) Each successive trophic level has less total energy. (True/False)
- (vi) is a binomial in which the genus name and specific epithet are identical in spelling.
- (vii) In binomial nomenclature, the generic names start with letter, and the names with small letters.

(viii) Acharya Jagdish Chandra Bose Indian Botanic Garden is located at

- (a) Dehradun (b) Shimla
(c) Shibpur (d) Lucknow

(ix) Molecular systematics present powerful tools for constructing phylogenetic trees. (True/False)

(x) Expand the term APG. $1 \times 10 = 10$

Section-B

2. Write short notes on the following :

- (i) Autecology
(ii) Synecology
(iii) Pedogenesis
(iv) Stratification

$2\frac{1}{2} \times 4 = 10$

3. Describe the ecological adaptation in xerophytes. 10

Section-C

4. What is Succession ? Explain the process of hydrosere. 10

5. Write explanatory notes on the following :

- (a) Ecological Pyramids
(b) Nitrogen Cycle

$5 + 5 = 10$

Turn Over

Section-D

6. Write short notes on the following :

(i) Systematics

(ii) Classification

(iii) Herbaria

(iv) Taxonomic keys

$2\frac{1}{2} \times 4 = 10$

7. (a) Define chemotaxonomy. Discuss the role of biomolecules as taxonomic aid.

(b) Define Botanical Garden. Explain its role. $5+5=10$

Section-E

8. (a) Explain the principles of ICBN.

(b) Explain principle of priority and its limitation.

9. (a) Explain the merits and demerits of Bentham and Hookers system of classification. $5+5=10$

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(b) Write short notes on the following :

(i) Cladograms

(ii) Phenograms

$2+2=4$