

Roll No. 2222730171

Total No. of Questions : 9]
(2033)

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UG (CBCS) Ist Year Annual Examination

3010

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 from each Section B, C, D and E. Attempt all parts of a question together.

Section-A

(Compulsory Question)

1. All parts of this question are compulsory :

(i) Define the term Synecology.

(ii) The plants which grow in sunlight and fail to grow in shade are called Sciophilophytes

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(1)

Turn Over

- (iii) Which one of the following plants grow in sand dunes ?
- (a) Psammophytes
 - (b) Psilophytes
 - (c) Oxylophytes
 - (d) Eremophytes
- (iv) Define the term ecesis.
- (v) The pyramid of number in a parasitic food chain is :
- (a) Upright pyramid
 - (b) Straight pyramid
 - (c) Inverted pyramid
 - (d) Spindle shaped pyramid
- (vi) Where is the Lloyd's botanical Garden located ?
- (vii) What is Beta Taxonomy ?
- (viii) Define Topotype specimen. *Eugene Odum*
- (ix) In which book Engler and Prantl published their system of classification ? *Ernst Haeckel*
- (x) Define Phenograms. *Henry Sargent*
1 × 10 = 10
Arthur. G. Tansley

Section-B

2. (a) Give a comprehensive account of soil profile and soil horizons along with its diagram.

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~~(b)~~ Give an account of morphological, anatomical and physiological adaptations of plants to low and high temperature conditions.

5+5=10

Or

3. ~~(a)~~ Write short notes on the following :

(i) Shelford law of tolerance

(ii) Soil texture

~~(b)~~ Explain influence of water and light on the distribution of plants.

5+5=10

Section-C

4. ~~(a)~~ What is Plant Succession ? Give a brief account of plant succession that takes place in a pond along with examples of each stage.

~~(b)~~ What is Ecosystem ? Explain its biotic and abiotic components.

5+5=10

Or

5. (a) What are the basic types of succession ? Elaborate the various sequential steps involved in the process of succession.

(b) What is Biogeochemical cycle ? Explain nitrogen cycle in detail.

5+5=10

Section-D

6. (a) Explain the role of anatomy and palynology in relation to taxonomy.

(b) What are Herbaria ? Elaborate their functions. Name a few famous herbaria of the world.

5+5=10

Or

7. (a) Give a brief account of significance of multiaccess or multientry keys in identification of the plants.

(b) What is Taxonomic hierarchy ? What are its characteristic features ?

5+5=10

Section-E

8. Write short notes on the following :

(i) Cladogram

(ii) OTUs

(iii) Numerical taxonomy

(iv) Binomial nomenclature

(v) Citation of author

2×5=10

Or

9. Give an account of Engler and Prantls' system of classification. Discuss merits and demerits of this system.

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