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325201

May, 2023

B. Sc. (Life Sciences) II SEMESTER

Botany II Plant Ecology and Taxonomy (BLS-201)

Time : 3 Hours

Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.*
2. *Answer any four questions from Part -B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART–A

1. (a) Differentiate between autecology and synecology. (1.5)

(b) What are survivorship curves? (1.5)

(c) Differentiate between Habitat and Niche. (1.5)

(d) Define eutrophication. (1.5)

(e) Discuss 'Shelford's Law of Tolerance'. (1.5)

(f) What is edge effect? (1.5)

(g) What is binomial nomenclature? (1.5)

(h) What is natural system of classification? (1.5)

(i) Differentiate between effective and valid publication? (1.5)

(j) Define herbarium. (1.5)

PART–B

2. (a) Define population. Explain the exponential and logistic models of population growth. (10)

(b) What are different types of ecological pyramids? (5)

3. (a) Differentiate between primary and secondary succession in a community. (5)

(b) Enlist abiotic components of ecosystem and explain their roles in an ecosystem. (10)

4. Describe the different kinds of species interactions in a population with suitable examples. (15)

5. Describe classification (up to series) proposed by Bentham and Hooker in detail. Give objectives, merits and demerits of this classification. (15)

6. (a) Discuss the principles and rules of ICBN. (10)

(b) Explain the role of phytochemical data as a source in taxonomy. (5)

7. Write short notes on any *three* of the following :

(a) Role of botanical gardens.

(b) Species Concept.

(c) Taxonomic evidence from palynology.

(d) Grazing and Detritus food chain.

(e) Cladogram. (15)