

2019

B.Sc. (Hons.)

4th Semester Examination

BOTANY

Paper - C9T

Plant Ecology and Phytogeography

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

1. Answer any five questions of the following :

5×2=10

- (a) What is homeostasis?
- (b) Define Niche and Biome.
- (c) Explain commensalism with example.
- (d) What is theory of Tolerance?
- (e) Distinguish between halophytes and heliophytes.

[Turn Over]

- (f) Explain the terms biomass and standing crop.
- (g) What are Pioneer and Climax species?
- (h) What are allopatric and sympatric speciations?

2. Answer any *four* of the following : 4×5=20

- (a) What is the difference between primary and secondary productivity? Explain the process of plant succession. 2+3
- (b) Give a brief account regarding the models of energy flow operating in an ecosystem. 5
- (c) What is soil profile? Explain the role of climate in soil development. 2+3
- (d) What is hydrological cycle? Explain the adaptations of plants to wind velocity. 2+3
- (e) Define Ecotone and edge effect. Explain the different types of water present in the soil. 2+3
- (f) Define species and population. Explain the characteristic features of a population. 2+3

3. Answer any *one* questions of the following :

1×10=10

- (a) i) What is Biogeochemical cycle? Explain Nitrogen cycle with reference to the role played by microorganisms. 1+5
- ii) Explain the model for energy flow in an ecosystem. 4
- (b) i) What is Endemism? Give a brief account of the different Phytogeographical divisions of India. 1+5
- ii) Give a brief account of Tundra Biome. 4
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