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Total No. of Questions : 11]

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BOTASEM-107

M.Sc. (Ist Semester) Examination Dec., 2022

BOTANY

Paper - BOT-103

**(Plant Ecology, Phytogeography and
Environmental Monitoring)**

Time : 3 Hours]

[Maximum Marks : 40

The question paper contains three Sections.

Section-A

(Marks : 1 × 10 = 10)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **1** mark.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **3** marks.

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **5** marks.

Section-A

1. Define the following :

(i) Habitat

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(1)

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- (ii) Detritivorus
- (iii) Rule of Ecological tenth
- (iv) Ecesis
- (v) Nitrification
- (vi) PM-2.5
- (vii) Phytogeography
- (viii) Endemics
- (ix) Silviculture
- (x) Green Belt

Section-B

2. Write a brief note on Ecological Niches.

Or

Write short notes on the following :

- (i) Scope of ecology 1
- (ii) Food chain and food web 2

3. Write a short note on the ecological pyramids and their limitations.

Or

Explain the following with examples :

- (i) Causes of plant succession 1½
- (ii) Phosphorus cycle 1½

4. Discuss briefly the effect of environmental pollution on plants.

Or

Outline briefly :

- (i) Sources of water pollution 1
- (ii) EIA 2

5. Differentiate between Sanctuary and National Park, citing any *two* names of each.

Or

Write short notes on the following :

- (i) Plant dispersal and migration 2
- (ii) Geographical barriers 1
6. Describe the vegetation types of India with special reference to forest.

Or

Discuss briefly :

- (i) Role of IUCN in conservation of natural resources 2
- (ii) Characteristic features of agroforestry 1

Section–C

7. Write an explanatory note on the composition and structure of an ecosystem.
8. Discuss briefly process and models of plant succession, citing suitable examples.
9. Write a detailed account on global consequences of air pollution with special reference to global warming and ozone depletion.
10. Define Biome. Add a detailed note on characteristic vegetation of the Indian Thar desert. Suggest some measures for conservation strategies.
11. Differentiate between renewable and non-renewable resources. Add a brief note on new alternative energy resources, supporting your answer with suitable examples.