

**G-3/356/22**

Roll No. ....

**III Semester Examination, January 2022**

**M.Sc.**

**BOTANY**

Paper II

(Ecology-I, Ecosystem and Vegetation Ecology)

Time : 3 Hours ]

[ Max. Marks : 80

**Note :** *All questions are compulsory. Question Paper comprises of 3 Sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

**SECTION A**

**1×8=8**

**(Objective Type/Multiple Choice Questions)**

*Choose the correct answer :*

1. World distribution of primary production is minimum in :  
(a) Grasslands                      (b) Deserts  
(c) Moist forest                      (d) Coral reefs
2. Macro-consumers in Ecosystem are :  
(a) Autotroph                      (b) Saprotrophs  
(c) Osmotrophs                      (d) Phagotrophs

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3. Which of the following is a premises of sustainable development ?
- (a) Structural change in economy
  - (b) Environment impact assessment
  - (c) Compatibility between ecology and economics
  - (d) Regional carrying capacity based development
4. To whom project is submitted for authorization ?
- (a) Environmental authority
  - (b) Authorization authority
  - (c) Analyzing authority
  - (d) Evaluation authority
5. Which of the following survivorship curve is shown by human population ?
- (a) Highly convex curve
  - (b) Highly concave curve
  - (c) Diagonal curve
  - (d) All of the above
6. Among the following which character is a synthetic character ?
- (a) Frequency                      (b) Sociability
  - (c) Vitality                         (d) Fidelity

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7. Sucession initiated on sand is known as :
- (a) Lithosphere                      (b) Psammosere
  - (c) Halosere                         (d) Hydrosere
8. Inter community change is a feature of which of the following type of vegetation development ?
- (a) Cyclic changes                      (b) Non cyclic changes
  - (c) Random changes                      (d) Systematic changes

**SECTION B**

**6×4=24**

**(Short Answer Type Questions)**

**Note : Answer the following questions in 250 words.**

**Unit-I**

1. Describe the components of Ecosystem.

*Or*

Write a note on Ecological efficiencies.

**Unit-II**

2. Write a brief note on ecosystem restoration.

*Or*

Write a concise note on plant invasion.

**Unit-III**

3. Write short note on quantitative characters of plant community.

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*Or*

Explain the population regulation.

**Unit-IV**

4. Explain the steps in mechanism of Ecological succession.

*Or*

Describe the types of Ecological Niches.

**SECTION C**

**12×4=48**

**(Long Answer Type Questions)**

**Note :** Answer the following questions in 500 words.

**Unit-I**

1. Write a detailed note on Global Bio-geo chemical cycles.

*Or*

What is primary production ? Discuss its methods of measurement.

**Unit-II**

2. Discuss the Ecological perturbations and its impact.

*Or*

Discuss the steps in evaluation of project by EIA.

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**Unit-III**

3. Describe the characteristics of plant community.

*Or*

Discuss the concept of population and its characteristics.

**Unit-IV**

4. Discuss the changes in Ecosystem properties during succession.

*Or*

Explain the succession by taking a suitable example of Hydrarch or Xerarch succession.

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