

[ 4 ]

4. Discuss the theories of climax.

Or

Describe the types of Ecological climax.

**SECTION 'C' 12×4=48**

*(Long Answer Type Questions)*

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

1. Discuss the energy flow pathways.

Or

Describe the structure of any artificial Ecosystem.

2. Write an account on EIA.

Or

Write an essay on Sustainable development.

3. Discuss the characteristics of population.

Or

Discuss the analysis of communities.

4. Write a detail note on Interspecific association.

Or

Discuss the mechanism of Ecological succession.

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G-3/310/21

Roll No.....

**M.Sc. III Semester Examination, April-2021**

**BOTANY**

**Paper II**

*(Ecology-I, Ecosystem and Vegetation Ecology)*

Time : 3 Hours ]

[Maximum 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**

*(Multiple Type Questions)*

*Choose the correct answer :*

1. Rice field is an example of :

- (a) Artificial Ecosystem  
(b) Man engineered Ecosystem  
(c) Both (a) and (b) (d) Natural Ecosystem

2. The rate of storage of organic matter not used by heterotrophs is known as :

- (a) Gross primary production

[ 2 ]

- (b) Net community production  
(c) Secondary production  
(d) Net Primary production
3. Which of the following is an agenda of sustainable development ?  
(a) Structural change in Economy  
(b) EIA  
(c) Regional carrying capacity based development  
(d) All of these
4. Who amongst the following prepares guidelines for EIA ?  
(a) Authorizing authority  
(b) Environmental authority  
(c) Evaluation authority  
(d) All of these
5. Which of the following character of community is represented by phenogram ?  
(a) Qualitative (b) Quantitative  
(c) Synthetic (d) All of these
6. The density number or biomass per unit total space is known as :  
(a) Crude density (b) Specific density  
(c) Ecological density (d) Economic density

[ 3 ]

7. Hydrilla, Potamogeton, Vallisnaria and Utricularia grows in which of the following seral stage of Hydrarch succession ?  
(a) Rooted submerged stage  
(b) Floating stage  
(c) Reed swamp stage (d) Sedge meadow stage
8. Among the first to use the term Niche was :  
(a) Elton (b) Clarke  
(c) Grinnell (d) Hutchinson

*SECTION 'B'*

**4×6=24**

*(Short Answer Type Questions)*

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

1. Define the primary production and its global pattern of distribution.

Or

Explain the Litter decomposition.

2. What are sustainability indicators ?

Or

Discuss the impact of ecological perturbations.

3. Discuss the population growth curves.

Or

Describe the synthetic characters of plant community.