

**PD-382-S.E.-CV-19**  
**M.Sc. BOTANY (3<sup>rd</sup> Semester)**  
Examination, Dec.-2020  
**Paper-III**  
**PLANT ECOLOGY**

Time : Three Hours]

[Maximum Marks : 80

[Minimum Pass Marks : 29

**Note :** Answer from both the Sections as directed. The figures in the right-hand margin indicate marks.

**Section-A**

1. Answer all questions by choosing the correct answer:-

1x10=10

- (a) Plants living on saline soils are known as...  
(i) Xerophytes (ii) Halophytes (iii) Oxalophytes (iv) Lithophytes
- (b) An organism that survives as dead organic matter is called...  
(i) Parasite (ii) Symbiotic (iii) Scavenger (iv) Saprophyte
- (c) Teak plants grow naturally in...  
(i) Tropical evergreen forest (ii) Temperate forests  
(iii) Temperate deciduous (iv) Tropical deciduous
- (d) Which one of the following is connected with enhanced greenhouse effect.  
(i) Nitrogen cycle (ii) Oxygen cycle (iii) Carbon cycle (iv) Phosphorus cycle
- (e) The ecosystem with maximum production...  
(i) Grassland (ii) Freshwater (iii) Desert (iv) Estuarine
- (f) Biological spectrum is concerned with the analysis of...  
(i) Light intensity (ii) Water colour (iii) Photo chrome (iv) Life forms
- (g) Ecesis refers to the....  
(i) Migration of a community (ii) Germination of prop gules  
(iii) Successful establishment of plantlets (iv) Successful elimination of plants
- (h) Which biome can be recognized by its coniferous forests and relatively infertile, acidic soil.  
(i) Grassland (ii) Taiga (iii) Deciduous forest (iv) Tundra
- (i) Peroxy acetyl nitrate (PAN) is a byproduct of....  
(i) Fungicide (ii) Pesticide (iii) Leaded petrol (iv) Automobile exhaust
- (j) Hydrocarbons frequently combine with  $\text{NO}_2$  and produce...  
(i) Green house effect (ii) Secondary pollutants  
(iii) Photochemical smog (iv) Primary pollutants

2. Answer all questions is very short:-

2x5=10

- (a) What is primary production?
- (b) What is the "continuum concept"?
- (c) What is 'Relay floristic' and 'Initial floristic composition'?
- (d) What is Green House effect?
- (e) Define "Ecosystem restoration".

**Section-B**

15x4=60

Answer all questions.

3. Describe energy flow in an ecosystem. Explain with the help of various energy flow models.

**OR**

Comment upon:-

- (a) Soil profile (b) Biotic factor

4. Describe in detail the mechanism of plant succession. What are the changes in ecosystem properties during succession?

OR

Write concise notes on (any two):-

(a) Biomes (major) of the world (b) Community coefficients (c) Ecological Niche

5. Write an essay on Water pollution.

OR

Write explanatory notes on:-

(a) Ozone hole (b) Consequences of climatic change

6. What is meant by ecological perturbations? How these affect the plants?

OR

What do you understand by "Sustainable development". Describe the concept in detail.