

**M.Sc. BOTANY
FOURTH SEMESTER
PLANT ECOLOGY
MSB-403 D**

[USE OMR SHEET FOR OBJECTIVE PART]

**SET
B**

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

- Many of the species that constitute natural communities are the products of:
 - Ecological process
 - Co evolutionary process
 - Phylogenetic process
 - Evolutionary process
- Which one of the following is the first stage of water erosion?
 - Rill erosion
 - Sheet erosion
 - Splash erosion
 - Gully erosion
- Green house effect is increasing due to:
 - Change in atmospheric pressure
 - Melting of glaciers and dry atmospheric conditions
 - Change in number of green house gases
 - Change in the concentration of green house gases
- This is not one of the possible adverse effects of the phenomena of global warming:
 - Extraordinary weather patterns
 - Retreat of glaciers
 - An increase of UVB radiation
 - Rise in the sea level
- The protected area is generally considered the core units of:
 - In situ conservation
 - Ex situ conservation
 - Both a and b
 - Only a and not b
- Good ozone is found in the:
 - Stratosphere
 - Troposphere
 - Ionosphere
 - Mesosphere
- Which of the following is not the branch of geo-informatics?
 - Remote Sensing
 - Cartography
 - Centesis
 - Photogrammetry
- Which is an example of restricted area endemic?
 - Mangroove
 - Rhododendron
 - Orchid
 - Shirui lily
- The area where a plant first evolved and from where it dispersed to new areas is known as:
 - Center of dispersal
 - Migratory
 - Centre of replacement
 - All of the above

10. North East occupies 7.7% of India's total geographical area supporting 50% of the flora, of which:
- | | |
|-----------------------|-----------------------|
| a. 34.34% are endemic | b. 31.58% are endemic |
| c. 35% are endemic | d. 23 % are endemic |
11. Ecological integrity is a measure of the composition, structure and function of:
- | | |
|-------------------|----------------------|
| a. Natural system | b. Ecological system |
| c. Both a and b | d. Biological system |
12. In wind erosion, what is the diameter of particles that are moved by bounce?
- | | |
|---------------|-------------|
| a. 0.1-0.5 mm | b. 0.5-1 mm |
| c. 1-2 mm | d. <0.5 mm |
13. Surface mining is often used when coal is less than:
- | | |
|-------------------------|-------------------------|
| a. 150 feet underground | b. 250 feet underground |
| c. 300 feet underground | d. 200 feet underground |
14. The main cause of acid rain is:
- | | |
|-------------------|---------------------|
| a. Soil pollution | b. Water pollution |
| c. Air pollution | d. All of the above |
15. Sulphur dioxide is produced by:
- | | |
|-------------------------|-------------------------------|
| a. Nuclear power plants | b. Coal power plants |
| c. Thermal power plants | d. Hydroelectric power plants |
16. The most rapidly declining natural resources in the world is:
- | | |
|----------|-------------|
| a. Water | b. Forest |
| c. Wind | d. Sunlight |
17. Remote sensing records:
- | | |
|---------------------------|-------------------|
| a. Radio wave | b. Frequency wave |
| c. Electromagnetic energy | d. Microwave |
18. Alpine Zone is characterized by:
- | | |
|---------------------------|-----------------------------|
| a. Presence of tree | b. Absence of tree |
| c. Presence of only dicot | d. Presence of only monocot |
19. Which of the following is the not the vegetation of alpine zone?
- | | |
|-----------------------------------|---------------------------------------|
| a. Shorea robusta and Amara trees | b. Cushion plants and perennial grass |
| c. Mosses and lichens | d. Sedges and oak |
20. Which plants cannot grow in lime soil?
- | | |
|------------|------------|
| a. Spinach | b. Peppers |
| c. Peas | d. Onion |

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. What are phytogeographical regions of India? Discuss in details the different phytogeographical region of India with Map. | 2+8=10 |
| 2. Write short notes on the following: a) Principles and postulates of conservation ecology. b) Protected area and their management. | 5×2=10 |
| 3. Discuss in details the Environmental problem associated with coal mining in North East India. | 10 |
| 4. What is shifting cultivation? Discuss its ecological implication. | 2+8=10 |
| 5. Write short notes on the following: a) Cause of ozone depletion b) Acid rain | 5×2=10 |
| 6. What is remote sensing and GIS? Discuss in details the application of GIS in environmental management. | 2+8=10 |
| 7. What is plant migration? Discuss in brief the barrier of plants distribution. | 2+8=10 |
| 8. What is green house effect? Write down the role of different green house gases responsible for global warming. | 2+8=10 |

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