

M.Sc. BOTANY
SECOND SEMESTER [SPECIAL REPEAT]
PLANT ECOLOGY
MSB-201
[USE OMR SHEET FOR OBJECTIVE PART]

**SET
A**

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

- Ecology deals with the group of different kinds of populations in an area is known as:
a. Community b. Succession
c. Cohabitant d. Ecotone
- Individual study of a species is known as:
a. Autecology b. Synecology
c. Ecology d. Habitat ecology
- The concept of using Subscripts to show the energy content of different tropic levels is known as:
a. Y shaped energy flow model concept b. Eltonian concept
c. Lindeman's Trophic -Dynamic concept d. None of the above
- When a stationary and stable age distribution exists, the specific growth rate is called:
a. Co-efficient of population growth b. Carrying capacity
c. Age structure d. Intrinsic rate of natural increase
- Density increases rapidly in exponential or compound interest fashion and stops abruptly as environmental resistance or another limit become effective more or less suddenly in:
a. The J shaped form of growth curve b. Sigmoid form
c. Acceleration phase d. Survivorship curve
- Suppose in an ecosystem considering the availability of space, food and availability of minimum space requirement of an individual of species. $K=100$. $N=99$. What is the carrying capacity?
a. 1 b. 0.01
c. 0 d. 0.001
- Phenology is:
a. A quantitative character of a community b. Defines diversity of a community
c. A qualitative character of a community d. Defines germination of a species
- Climax community results from which major activity:
a. Succession b. Cohabitation
c. Stratification d. Competition

9. The bare area is occupied by new community by the migrated species is known as:
a. Stabilization
b. Competition
c. Nudation
d. Invasion
10. Which of the following is not a major greenhouse gas?
a. Carbon dioxide
b. Methane
c. Water vapour
d. Calcium carbonate
11. Which is the characteristic of Buffer zone of biosphere reserve?
a. No human activity is allowed
b. Free human activity occur
c. Human activity is limited
d. Wild animals are absent
12. First national park of India was:
a. Panna national park
b. Kaziranga national park
c. Jim Corbett national park
d. Satpura national park
13. WWF is a:
a. Central governmental organisation
b. State governmental organisation
c. Non governmental organisation
d. Both a and b
14. UNEP full form is:
a. United Nations Education Programme
b. Union of National Environment Programme
c. Union of National Education Programme
d. United Nations Environment Programme
15. Often in water bodies subjected to sewage pollution fishes dies due to:
a. Pathogens related to sewage
b. Reduction of dissolved O₂ caused by microbial activity
c. Clogging of their gills by solid substances
d. Foul smell
16. When a threatened plant needs urgent measures to save it from extinction, the desirable approach is:
a. In situ conservation
b. Ex situ conservation
c. Cryopreservation
d. Biopreservation
17. Critically Endangered is the highest risk category assigned by the IUCN for:
a. Domesticated species
b. Exotic species
c. All of the above
d. Wild species
18. Field gene bank is the most common method of conserving genetic resources with:
a. Spores
b. Orthodox seeds
c. Pollen grains
d. Recalcitrant seeds
19. Ozone depletion is caused due to increase in the level of:
a. Water vapour
b. Oxygen
c. Chlorofluorocarbon
d. Carbon monoxide
20. The Botanical Garden and the National Botanical Research Institute are located respectively at:
a. Pune and Howrah
b. Howrah and Lucknow
c. Darjeeling and Lucknow
d. Shimla and Dehradun

(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

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

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| 1. What is ecological succession? Discuss in detail the type and the general process of succession. | 2+8=10 |
| 2. What is Population? Describe the different attributes of population and population growth curve with suitable diagram. | 2+8=10 |
| 3. What is Ecosystem? Describe any three components of Ecosystem in brief with special reference to Y shaped model of energy flow with suitable diagram. | 2+5+3=10 |
| 4. What is Community? What are the different quantitative characters of a community? Discuss with proper formulas. | 2+8=10 |
| 5. Write short notes on:
a) Food chain
b) R and K selected species | 5+5=10 |
| 6. What is water pollution? Discuss the major cause of water pollution and its effect in the ecosystem. | 2+8=10 |
| 7. What is In situ conservation? Discuss in details the international and Indian initiatives taken for In situ conservation. | 2+8=10 |
| 8. Write short notes on:
a) Field gene bank
b) Principles and practices of Ex situ conservation | 5+5=10 |

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