

M.Sc. ZOOLOGY
SECOND SEMESTER
ECOLOGY & ANIMAL BEHAVIOUR
MSZ-201

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

(Objective)

Choose the correct answer from the following:

1 × 20 = 20

- Gross primary productivity and Net primary productivity can be related as:
 - GPP = NPP-R
 - GPP = NPP+R
 - NPP = GPP+R
 - None of the above
- The total amount of sugar and other organic materials produced in plants per unit time is calledproduction.
 - Gross Secondary
 - Net Secondary
 - Both a & b
 - None of the above
- Deserts occupies about% of the earth surface.
 - 17
 - 27
 - 37
 - None of the above
- Y-shaped energy flow model is the best applied because it explains:
 - Energy flow in grazing food chain
 - Energy flow in detritivore food chain
 - Both a & b
 - None of the above
- Total incoming solar radiation in a year is:
 - 11,872 gcal/cm²
 - 18,872 gcal/cm²
 - 11,18,872 gcal/cm²
 - None of the above
- This form of behaviour is independent of an environment and learning.
 - Instinct
 - Reflex
 - Kinesis
 - Motivation
- Selective learning form of behaviour is also known as:
 - Imprinting
 - Reflexes
 - Trial & Error
 - Instinct
- Which among these is not a form of camouflage?
 - Colour shading
 - Counter shading
 - Colour resemblance
 - Colour disruption
- An ideology of an organism living & surviving in provided & specific environmental conditions is called:
 - Niche
 - Habitat
 - Ecosystem
 - All of the above

10. Accessibility & procurability of both physical & biological components of a habitat by animals is termed as:
 - a. Habitat preference
 - b. Habitat availability
 - c. Habitat quality
 - d. Habitat quantity
11. When a niche of a species is determined by multiple environmental factors, it is called:
 - a. Trophic niche
 - b. Habitat niche
 - c. Spatial niche
 - d. Hyper volume niche
12. The association between members of different species, only one is benefited and neither is harmed:
 - a. Amensalism
 - b. Commensalism
 - c. Exploitation
 - d. None of the above
13. Taxonomically different species occupying similar habitats in different geographical regions are called:
 - a. Ecotone
 - b. Eco-species
 - c. Ecological equivalents
 - d. Character displacement
14. The tendency and act of an organism to defend a space and exclude other organisms of the same or other species from the defended area is called:
 - a. Kin selection
 - b. Territory
 - c. Territoriality
 - d. Ritualized aggression
15. Behaviour that reduces Darwinism is:
 - a. Altruism
 - b. Reciprocal altruism
 - c. Kin Selection
 - d. None of the above
16. The individualistic concept was supported by:
 - a. Clements
 - b. Glyson
 - c. Whittaker
 - d. Odum
17. The most common type of dispersion found in nature is:
 - a. Random
 - b. Regular
 - c. Clumped
 - d. None of the above
18. In a stabilized ecosystem, the P/R ratio is:
 - a. ≤ 1
 - b. ≥ 1
 - c. $\frac{1}{2}$
 - d. None of the above
19. A J shaped curve is represented by a:
 - a. Broad based pyramid
 - b. Bell shaped pyramid
 - c. Urn shaped pyramid
 - d. Straight pyramid
20. Which of the following type of succession occurs due to internal forces?
 - a. Primary succession
 - b. Secondary succession
 - c. Biotic succession
 - d. Deflected succession

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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. Write short notes on the following: | 2.5×4=10 |
| a) Harvest method | |
| b) Carbondioxide Assimilation Method | |
| c) Primary production | |
| d) Secondary production | |
| 2. Write a note on the primate social system with suitable examples. | 10 |
| 3. Discuss in detail the Lotka-Volterra equation with all the possible assumptions & inferences. | 10 |
| 4. Write down about the different forms and features of stereotyped behaviour with examples in each category. | 10 |
| 5. Write a note on the different types of communications used by animals. | 10 |
| 6. What is an ecological niche? Explain the three aspects of an ecological niche. | 10 |
| 7. What is ecological succession and why did Odum prefer to call this orderly process as ecosystem development? Explain with all the parameters. | 10 |
| 8. What is a community and how is it different from a population? Explain the philosophies regarding the composition of a community. | 4+6=10 |

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