

M.Sc. ZOOLOGY
SECOND SEMESTER (REPEAT)
ECOLOGY & ANIMAL BEHAVIOUR
MSZ-201
[USE OMR SHEET FOR OBJECTIVE PART]

**SET
A**

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

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

(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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