



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 5th Semester Examination, 2021

DSE-P2-ZOOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks

**The question paper contains GROUP-A and GROUP-B.
The candidates are required to answer any *one* from *two* groups and
candidates should mention it clearly on the Answer Book.**

GROUP-A

ANIMAL BEHAVIOUR AND CHRONOBIOLOGY

1. Answer any *five* questions from the following: 1×5 = 5
 - (a) For which discoveries, Niko Tinbergen, Karl von Frisch and Konrad Lorenz got Nobel Prize in Physiology or Medicine in 1973?
 - (b) What do you mean by chronobiology?
 - (c) Give an example of habituation.
 - (d) Expand SCN.
 - (e) What is biological oscillation?
 - (f) Define allomone.
 - (g) Who proposed the theory of kin selection?
 - (h) What is zeitgeber?

2. Answer any *three* questions from the following: 5×3 = 15
 - (a) Write a note on the ultimate and proximate causes of behavior.
 - (b) Write a note on imprinting, citing suitable examples.
 - (c) Write a note on adaptive significance of biological clocks.
 - (d) Explain altruism and reciprocal-altruism with appropriate examples.
 - (e) Discuss the role of pheromones as a means of communication.

3. Answer any *two* questions from the following: 10×2 = 20
 - (a) Differentiate between instinct and learning behavior. Describe classical and operant conditioning with appropriate examples. Define reflex. 2+6+2
 - (b) Describe the concept of kin selection theory with examples of honey bees. Write a note on foraging of honey bees with a special note on various dances. 4+6

- (c) Write a note on intra-sexual and inter-sexual selection. Comment on sexual conflict in parental care. 5+5
- (d) Discuss the role of photoperiod in seasonal reproduction of vertebrates. Add a note on role of melatonin in photoperiodism. 5+5

GROUP-B

WILDLIFE CONSERVATION AND MANAGEMENT

1. Answer any *five* questions from the following: 1×5 = 5
- (a) What do you mean by “ecological restoration”?
 - (b) In which National Park the “Hangul Project” was started in India?
 - (c) According to IUCN Red List, what is the status of Red Panda?
 - (d) Name the largest environmental conservation organization in the world.
 - (e) What does the acronym MIKE stands for in the world of conservation?
 - (f) What are community reserves?
 - (g) What is a Gene Bank?
 - (h) What is ecotourism?
2. Answer any *three* questions from the following: 5×3 = 15
- (a) Write a note on the causes and consequences of human-wildlife conflict.
 - (b) Differentiate between National Park and Wildlife Sanctuary.
 - (c) Write a note on values of wildlife for mankind.
 - (d) Write a note on estimation of carrying capacity.
 - (e) Discuss the role of GIS and remote sensing in wildlife management.
3. Answer any *two* questions from the following: 10×2 = 20
- (a) Differentiate between *in situ* and *ex situ* conservation. Write a detail account of limitations of these two approaches of conservation. 4+3+3
 - (b) Give an account of advantages and disadvantages of ecotourism. Write a note on the ways of restoration on degraded habitats. 5+5
 - (c) How does conservation differ from management? Enumerate the causes of degradation of wildlife. Briefly discuss on the categories of threat to wildlife recognized by IUCN. 2+5+3
 - (d) Write a note on “Project Tiger”. Comment on management challenges in tiger reserves. 6+4

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