B.Sc. 6th Semester (Honours) Examination, 2025 (CBCS)

Subject : Zoology

Course : DSE-3

(Animal Behaviour)

Time: 2 Hours **Full Marks: 40**

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Group – A

1. Answer *any five* of the following questions: 2×5=10

   (a) Define Kin selection with suitable example.

   (b) Distinguish between associative and non-associative learning.

   (c) What do you mean by 'sexual conflict' in parental care?

   (d) What is an actogram? State its uses in interpreting rhythms and activities.

   (e) What is releaser pheromone? Give an example.

   (f) Cite the role of the suprachiasmatic nucleus (SCN) in mammals.

   (g) Illustrate filial imprinting with suitable example.

   (h) What is polyandry? Give an example.

Group – B

2. Answer *any two* of the following questions: 5×2=10

   (a) Explain 'dominance hierarchy' using primates as model animals.

   (b) Elaborate the concept of reciprocal altruism with examples.

   (c) Write about 'nuptial gifts' and their role in female mate choice. What is lekking? Give a suitable example. 3+2

   (d) Why does jet lag occur? Explain the function of melatonin in regulating circadian rhythm in vertebrates. 2+3

Group – C

3. Answer *any two* of the following questions: 10×2=20

   (a) Distinguish between taxis and kinesis. Describe the types of kinesis with suitable examples. How does sign stimulus play specific role in fixed action pattern (FAP)? Explain with suitable example. 2+4+4

(b) Distinguish between visual and auditory signals. Distinguish between 'honest' and 'dishonest' communication. Describe the communication mechanism involved in foraging behaviour of honey bees. 2+2+6

(c) What is circalunar rhythm? How does masking differ from entrainment? Explain transcription-translation feedback loop mechanism that regulates biological clock in *Drosophila*.

(d) Compare intrasexual and intersexual selection with relevant examples. Describe the role of sexual selection in shaping animal behaviour and morphology. 4+6

B.Sc. 6th Semester (Honours) Examination, 2025 (CBCS)

Subject : Zoology

Course : DSE-3 (OR)

(Wildlife Conservation)

Time: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group – A

1. Answer *any five* of the following questions: 2×5=10

   (a) Distinguish between rehabilitation and reclamation.

   (b) Write about the impact of ecological disturbance on wildlife.

   (c) State the aesthetic values of wildlife.

   (d) Can we identify the gender of a tiger using pug mark? Provide reason.

   (e) Write about manual and automatic digitizing as applicable for input paper maps into a GIS.

   (f) Cite two reasons for man-elephant conflict in North Bengal.

   (g) In what ways 'setting back succession' can benefit wildlife conservation?

   (h) Highlight habitat destruction as a cause of wildlife depletion.

Group – B

2. Answer *any two* of the following questions: 5×2=10

   (a) How to manage excess population in context of wildlife. What is endemic species? Give two examples.

   (b) What are the basic differences between Wildlife Sanctuaries and National Parks in India? Give appropriate examples in each case. 5

   (c) What is meant by fertility schedule? Discuss about the sex ratio computation in Wildlife study. 2+3

   (d) How does climax persistence maintain a disturbed community? What is a community reserve? Mention its significance in wildlife conservation. 2+(2+1)

Group – C

3. Answer *any two* of the following questions: 10×2=20

   (a) What do you mean by grazing and resting period? Define continuous grazing. Write down pros and cons of continuous grazing. Write a short note on conservation ethics. 2+1+4+3

(b) What is biodiversity hotspot? Name different biodiversity hotspotsin India. Describe the role of different physical and biological parameters in habitat analysis. 2+2+6

(c) Define the term 'Ecotourism'. How does it differ from 'Wildlife Tourism'? How these approaches can be helpful for wildlife conservation? Mention the approaches adopted for managing excess wildlife populations. 1+2+3+4

(d) Categorize the different types of Protected Areas in India based on the Wildlife (Protection) Act with examples for each type. Mention two major management challenges for tiger conservation in the reserved areas. Write two modes of mitigation of man-tiger conflict. 3+4+3
