



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 5th Semester Examination, 2022-23



ZOOADSE01T-ZOOLOGY (DSE1/2)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

1. Answer any **eight** questions from the following: 2×8 = 16
- (a) Define Kin selection.
 - (b) What is entrainment?
 - (c) Define reciprocal altruism with an example. 1+1
 - (d) What is sign stimulus?
 - (e) What do you mean by sexual dimorphism? Give an example in birds. 1+1
 - (f) Distinguish between orthokinesis and klinokinesis.
 - (g) What are crepuscular animals? Give example. 1+1
 - (h) Name the author of 'On aims and methods in ethology' and 'Evolution and modification of behaviour and on aggression'. 1+1
 - (i) State 'Aschoff's rule'.
 - (j) What is 'nauptial gift'?
 - (k) Define habituation.
 - (l) What is 'Darwinian fitness'?
2. Answer any **three** questions from the following: 3×3 = 9
- (a) Differentiate between innate behaviour and acquired behaviour.
 - (b) Explain the evolution of altruistic trait with the help of Hamilton's rule.
 - (c) Write a short note on scan sampling with suitable example.
 - (d) Explain circannual rhythms with example. What is Zeitgeber? 2+1
 - (e) Describe age polyethism in honey bee society.
 - (f) What do you mean by asymmetry of sex? Give example. 2+1

3. Answer any **three** questions from the following: 5×3 = 15
- (a) Define intrasexual selection. Explain it with reference to before and after mating. 1+4
 - (b) Describe Tinbergen's four questions in animal behaviour with suitable example. 5
 - (c) Illustrate with suitable diagram the round dance and waggle dance of honey bee. Write the advantages of waggle dance. 4+1
 - (d) Differentiate between associative and non-associative learning. Discuss Pavlov's classical conditioning theory. 2+3
 - (e) Define imprinting. Mention its characteristics. Describe different types of imprinting with example. 1+1+3
 - (f) What is female choice? State the role of melatonin in maintaining photoperiodism in animal life. 2+3

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