



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY

Question Paper

B.Sc. Honours Examinations 2021

(Under CBCS Pattern)

Semester - VI

Subject: ZOOLOGY

Paper : DSE 4-T & P

Full Marks : 60 (Theory-40 + Practical-20)

Time : 3 Hours

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

The figures in the margin indicate full marks.

Biology of Insects

[Theory]

Answer *any two* of the following:

2×15=30

1. Mention some general features of insects. What is the reason behind the success of insects on the earth? (7+5)
2. Describe about the wings and wing articulation of insects with suitable diagram and proper example. 15

3. Differentiate between carrier and vector. Discuss the role of house flies and mosquitoes as important vectors. (5+5+5)

4. Describe the circulatory and nervous system of insects. (7+8)

Answer **any one** of the following: 1×10=10

5. Highlight the characteristics and significance of *Tropilaxis* in social insects.

6. Differentiate Allelochemicals from Semiochemicals in host-plant interaction process.

[Practical]

Answer **any one** of the following: 1×20=20

7. Enlist different methodologies of collection and preservation of insects with diagram pointing out their merits and demerits. (10+10)

8. Describe the morphology of various castes of *Camponotus* and describe any two major insect pests of paddy and their damages. (10+10)

9. With a labelled diagram, point out different structural components of insect's head. Add a note on the presence of different sutures in delimiting different zones within the insect head. (12+8)

Wild Life Conservation and Management

[Theory]

Answer *any two* of the following:

2×15=30

1. State the necessity for wildlife conservation. What are the major causes of wild life depletion? (7+8)
2. Highlight the advantages and disadvantages of in-situ and ex-situ conservation with examples? Distinguish between Sanctuary, National Park and Biosphere Reserve with examples. (5+10)
3. Mention the significance of Ecological corridor in conservation biology. Discuss in brief the concept of climax persistence. Add a note on human-wildlife conflict. (5 + 5 +5)
4. (a) What are the aims and objectives of Project Tiger? Name two Tiger reserves in West Bengal (3 + 2)
(b) What are the different Tiger conservation strategies? (5)
(c) Point out the negative impact of Ecotourism on wildlife conservation? (5)

Answer *any one* of the following:

1×10=10

5. (a) List few endangered vertebrates of West Bengal.
(b) Comment on the methods and significance of animal reintroduction.
(c) Define Important Bird Areas. (3+5+2)
6. What are the major ecological perturbances ? Discuss in brief the concept of climax persistence. What is habitat analysis? (4 + 4+2)

[Practical]

Answer **any one** of the following:

1×20=20

7. Identify the following wildlife fauna with their systematic position (up to order), IUCN status & three salient specimen characters: (4 x 5 = 20)

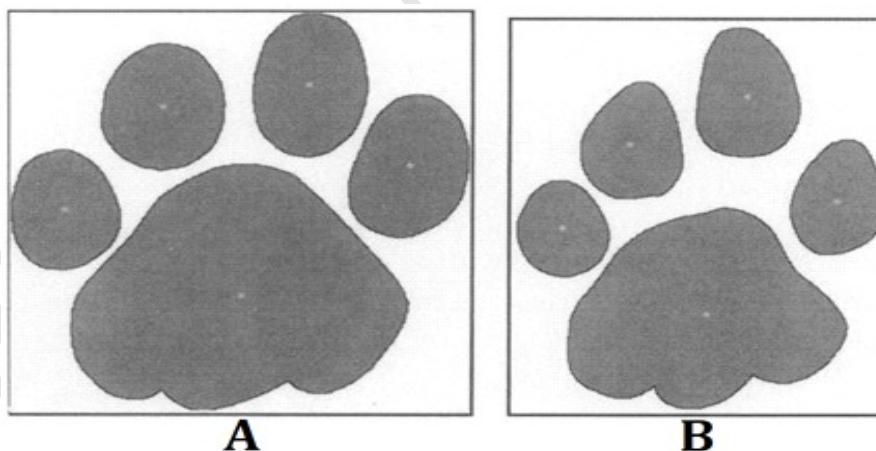
- *Macaca silenus*,
- *Ardeotis nigriceps*,
- *Pangshura tecta*,
- *Xanthophryne koynayensis*

8. (a) What is Pugmark?

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- (b) Identify the following figures A and B representing the tiger pugmarks with reasons.

(8+8)



9. Enlist different methods used in the study of avian and mammalian wildlife and focus on the advantages of using GPS. (20)
