



UNIVERSITY OF NORTH BENGAL
B.Sc. Programme 5th Semester Examination, 2020

DSE1-ZOOLOGY

Full Marks: 40

ASSIGNMENT

The questions are of equal value.

**The question paper contains three parts: PAPER-A, PAPER-B and PAPER-C.
The candidates are required to answer any *one* from *three* groups.
Candidates should mention it clearly on the Answer Book.**

PAPER-A

ANIMAL BIOTECHNOLOGY

Answer any *four* questions from the following

10×4 = 40

1. Write a note on restriction enzymes used in recombinant DNA technology.
2. Write a note on Plasmid as cloning vector.
3. Describe briefly the Sanger Method for sequencing of DNA.
4. Briefly describe the steps of PCR and mention its applications.
5. Describe the methodology for cDNA library generation.
6. Describe briefly the method of nuclear transplantation.
7. Briefly describe the process of molecular diagnosis of sickle cell anaemia.
8. Describe the methods of animal cell culture.

PAPER-B

APPLIED ZOOLOGY

Answer any *four* questions from the following

10×4 = 40

1. Write a comprehensive note on the different types of Host-parasite relationship.
2. Describe the life cycle and pathogenicity of *Plasmodium vivax*.

3. Describe the life history and pathogenicity of *Taenia solium*.
4. Write a note on the life cycle of *Sitophilus oryzae* and mention the nature and extent of damage caused by this pest.
5. Give an account of the medical importance and control measures of *Anopheles sp.*
6. Write a detailed note on artificial insemination in cattle.
7. Elaborate on management of breeding stock and broilers including diseases.
8. Briefly describe the technique of Induced breeding in fishes.

PAPER-C

AQUATIC BIOLOGY

Answer any *four* questions from the following

10×4 = 40

1. Describe briefly River as freshwater ecosystem.
2. Give an account of thermal stratification in a lake.
3. Briefly describe the nitrogen cycle in Lake Ecosystem.
4. Discuss about the various adaptations performed by deep sea organisms.
5. Briefly describe various causes of water pollution.
6. Give an account of Sewage treatment.
7. Describe the process of eutrophication in lake.
8. Briefly describe various causes of agricultural pollution.

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