UNIVERSITY OF NORTH BENGAL

B.Sc. Honours Part-III Examination, 2021

ZOOLOGY

PAPER-VIII (REVISED NEW SYLLABUS)

Full Marks: 90

ASSIGNMENT

The figures in the margin indicate full marks.

GROUP-A

(Evolution and Animal Behaviour)

Answer any *three* of the following questions $15\times3 = 45$

1. Giving definition of orthogenesis, explain with suitable examples how the food habit in horses changed during the course of their evolution.

2. Describe the role of zeitgeber in bird's migration with a note on circadian rhythm and its role behaviour.

3. Discuss on the biological species concept giving its merits and demerits.

4. Explain Fixed Action Pattern (FAP) with suitable examples with a note on Bees' dance language.

GROUP-B

(Environmental Biology and Biostatistics)

Answer any *two* of the following questions $15\times2 = 30$

5. Stating the definition, describe the major reasons of ozone-hole formation and its effects on environment.

6. Discuss the process of conservation of natural resources.

7. The body weight of 8 adult males and 8 adult females are as follows:

Male	50	58	60	55	59	56	54	64
Female	49	52	51	56	55	53	52	48

Find whether or not the mean weight of males significantly higher than that of females. (Given $t_{0.05} = 1.761$, $t_{0.01} = 2.624$, $t_{0.005} = 2.977$ at df = 14)

GROUP-C

Answer any *one* from the following specialization

(Bioinformatics)

Answer any *one* of the following questions

15×1 = 15

8. Enumerate the RAM, ROM, http and html in computer application with a note on the meaning and function of # in C-programming.

9. Write on the memory of computer and internet explorer and briefly state the uses of nucleotide sequence databases and protein sequence databases citing two example from each.

(Industrial Zoology and Pest Management)

Answer any *one* of the following questions

15×1 = 15

8. Give an account of the damages caused by *Sitophilous oryzae* and *Bandicota* sp. with special note on the principle of IPM.

9. With diagram enumerate the structure of silk gland and briefly describe the Pebrine disease of silk worm with reference to its symptoms causative agent and control measures.

(Aquaculture)

Answer any *one* of the following questions

15×1 = 15

8. Give a brief account of induced breeding with special reference to the process of making pituitary extract.

9. Briefly describe the composite fish culture with its merits and demerits and add a note on brackish water aquaculture.

(Medical Zoology)

Answer any *one* of the following questions

15×1 = 15

8. Describe the pathogenicity and control of *Plasmodium falciparum* and *Anchylostoma duodenale* with a special note on the biological control of mosquito.

9. Describe briefly the life cycle, pathogenicity and control of *Entamoeba histolytica* with a note on pulmonary amoebiasis.

(Biotechnology)

Answer any *one* of the following questions

15×1 = 15

8. Describe the principle, steps, applications and limitations of PCR.

9. Describe the outline procedure of cloning of a foreign DNA in a suitable cloning vector with a note on transformation into the *E. coli* host.

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