

**TDC Odd Semester Exam., 2020  
held in July, 2021**

ZOOLOGY  
( Honours )

( 5th Semester )

Course No. : ZOOH-503

( **Animal Behaviour, Biotechnology and  
Economic Zoology** )

Full Marks : 35

Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks  
for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. (a) What is meant by social behaviour?  
Give an account of social behaviour in  
any one group of non-human primate. 1+4=5
- (b) Write a brief note on motivated  
behaviour. 2

2. (a) Discuss briefly the associated learning  
or reflex conditioning and Pavlov's views  
on this type of behavioural pattern. 4
- (b) Write a note on biorhythms. 3

UNIT—II

3. (a) What is genetic engineering? Mention  
the basic steps in genetic engineering. 2+2=4
- (b) What are the positive and negative  
effects of genetic engineering? 3
4. (a) What is complementary DNA (cDNA)?  
Write a note on restriction endonuclease  
enzyme and its types. 1+4=5
- (b) What are plasmids? Elucidate. 2

UNIT—III

5. (a) What is blotting technique? What are its  
types? 1+1=2
- (b) Who developed the technique of particle  
bombardment gun for gene transfer?  
Discuss the technique briefly. 1+4=5

( 3 )

6. (a) What is gene therapy? What are the vectors being used in gene therapy? 1+2=3
- (b) Write notes on any *two* of the following genetic diseases : 2×2=4
- (i) Thalassaemia
  - (ii) Alzheimer disease
  - (iii) Sickle cell anaemia

UNIT—IV

7. (a) Write scientific name of the lac insect. Name two host plants of lac insect. 1+1=2
- (b) Discuss the life history of lac insect. Write the composition of lac. 4+1=5
8. (a) Write the scientific name of Eri silkworm and name their host plants. 1+1=2
- (b) Write a note on diseases of silkworms. 3
- (c) Write briefly on economic importance of honey. 2

UNIT—V

9. (a) What is meant by weed fishes? Name two weed fish species. 1+1=2

( 4 )

- (b) Why is fertilization necessary in a fish culture pond? Name a few commonly used fertilizers for fish culture pond. 2+1=3
- (c) What is algal bloom and how can it be controlled? 2
10. (a) Name any four breeds of chicken selected for poultry farming. 2
- (b) Discuss the requirements for laying out a poultry farm and the criteria need to be maintained for the construction of fowl house. 4
- (c) What is Ranikhet disease of chickens? 1

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