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ZOOLOGY

(Major)

Paper : 3.3

Time : 3 hours

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

*Candidates **eligible** for Internal Assessment shall
answer from PART—I only (Marks : 90)*

*Candidates **not eligible** for Internal Assessment shall
answer both from PART—I and PART—II (Marks : 100)*

PART—I

(Marks : 90)

UNIT—I

(**Biostatistics**)

(Marks : 20)

1. What is sample unit? Describe the method of selection of sampling unit. Write briefly on the experimental design. 4+8+8=20

(2)

Or

Write short notes on (any four) : $5 \times 4 = 20$

- (a) Students' *t* test
- (b) Importance of statistics in biology
- (c) Computer language
- (d) Computer programmes for biostatistical analysis
- (e) Chi-square test

UNIT—II

(**Ecology**)

(Marks : 25)

2. What is succession? Describe the causes, features, trends and basic types of succession. $3+12=15$

Or

Define biotic community. Describe features of grassland community. Write briefly on the management of Savannah grassland. $3+5+7=15$

3. Write short notes on (any two) : $5 \times 2 = 10$
- (a) Energy flow in ecosystem
 - (b) Mode of action of organo-chloro insecticides
 - (c) Adaptation to extreme of temperature
 - (d) Measurement of diversity

(3)

UNIT—III

(**Animal Behaviour**)

(Marks : 25)

4. Write notes on (any two) : 5×2=10

- (a) Circadian rhythm
- (b) Homing behaviour
- (c) Sign stimuli and stimulus filtering

Or

Differentiate between instinct and learning. Describe briefly the Pavlovian conditioning and latent learning. 5+5=10

5. Describe the method of studying genes and their influence on behaviour. Explain single and multiple gene effect on behaviour with examples. 5+10=15

Or

What are the properties of social group? Discuss the social behaviour of monkeys. 5+10=15

UNIT—IV

(**Wildlife Management and Conservation**)

(Marks : 20)

6. Describe the feeding and breeding behaviour of rhinoceros. What are the strategies of conservation of rhinoceros in India? 7+7+6=20

(4)

Or

Write notes on (any two) : $10 \times 2 = 20$

- (a) IUCN Red List Categories
- (b) Biosphere Reserve Programme
- (c) Endangered mammalian species of North-East

PART—II

(Marks : 10)

(In lieu of Internal Assessment)

7. What is food chain? Describe different food chains with example. $2+8=10$

Or

Write notes on any two : $5 \times 2 = 10$

- (a) Carrying capacity
- (b) Pheromones
- (c) Use of computer in biology

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