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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)

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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

(*Turn Over*)

Or

Write short notes on (any *four*) :   5×4=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*) :   5×2=10

(a) Energy flow in ecosystem

(b) Mode of action of organo-chloro insecticides

(c) Adaptation to extreme of temperature

(d) Measurement of diversity

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

Or

Write notes on (any *two*) :   10×2=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* :   5×2=10

(a)   Carrying capacity

(b)   Pheromones

(c)   Use of computer in biology

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