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V Semester B.Sc. Degree Examination, March - 2021

ZOOLOGY-V

Environmental Biology and Ethology
(CBCS 2020-21 Onwards Scheme)

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates:

- 1) Answer should be completely in English.
- 2) Draw neat labelled diagrams wherever necessary.

PART - A

I. Answer the following questions in one word or **One** sentence each. (10×1=10)

1. What is the natural residence of an organism called?
2. Define autecology.
3. What is primary productivity?
4. Name the gases which causes acid rain.
5. Define rodenticide with an example.
6. Expand IPM.
7. List any two applications of remote sensing.
8. Define habituation.
9. Name the daily cycle of activity that occurs over a 24 hours period of time.
10. What is altruism?

PART - B

II. Answer any **Five** of the following. (5×3=15)

11. State the laws of thermodynamics.
12. Write a note on polyclimax theory.
13. Comment on biological magnification.
14. Give any three demerits of wind energy.

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15. Incineration is one of the methods of solid waste management. Justify.
16. Write a note on round dance in honey bees.
17. Write a note on courtship behaviour.

PART - C

III. Answer any Five of the following.

(5×5=25)

18. Define ecological niche explain spatial and trophic niche with examples.
19. Write notes on:
 - a) Antibiosis
 - b) Commensalism
20. List the advantages and disadvantages of nuclear reactors.
21. Write short notes on:
 - a) Seed banks
 - b) Zoological gardens
22. Explain kinesis with a suitable example
23. "Termites are social insects". Justify.
24. Citing any two examples explain parental care in amphibians.

PART - D

IV. Answer any Two of the following.

(2×10=20)

25. Temperature is an abiotic factor. Discuss.
 26. Write a note on :
 - a) Global Warming
 - b) Consequences of Ozone layer depletion
 27. Discuss in-situ conservation of wild life
 28. What are pheromones? Explain its role in insects.
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V Semester B.Sc. Degree Examination, March - 2021

ZOOLOGY**Genetics and Biotechnology
(CBCS) (2021 Onwards)****Paper : VI****Time : 3 Hours****Maximum Marks : 70****Instruction to Candidates:**

- 1) Draw neat labelled diagrams wherever necessary.
- 2) Answers should be completely in english.

PART - A**I. Answer the Following in **One** word or **One** sentence.****(10×1=10)**

1. What type of twins are produced when a zygote splits into two cells?
2. Write the Phenotypic ratio of Mendel's dihybrid cross.
3. What are alleles?
4. Mention two types of gynandromorphs.
5. Give any two methods of negative eugenics.
6. What are cosmids?
7. List any two types of bioreactors.
8. Mention two types of host cells used in rDNA technology.
9. Define artificial insemination.
10. Expand AFLP.

PART - B**II. Answer any **Five** of the following.****(5×3=15)**

11. State the law of segregation.
12. What is hypertrichosis? Name the chromosome involved in it.
13. Define:
 - a) Cistron
 - b) Muton
 - c) Recon
14. Write a note on Physical mutagens.

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15. List the steps involved in embryo transfer.
16. What is gene therapy? Mention any two types.
17. List any three applications of DNA finger printing.

PART - C

III. Answer any Five of the following.

(5×5=25)

18. Write a note on erythroblastosis foetalis.
19. Explain cytoplasmic inheritance with reference to Kappa particles in Paramecium.
20. Describe the structure of Lampbrush chromosomes.
21. With reference to sex determination explain the
 - a) XX - XY
 - b) ZZ - ZW
22. Explain genic balance theory of Bridge's.
23. Write notes on:
 - a) Electroporation.
 - b) Micro injection.
24. Define PCR technique Mention its applications.

PART - D

IV. Answer any Two of the following.

(2×10=20)

25. What are supplementary genes? With reference to inheritance of comb shape in poultry fowls workout the following crosses:
 - a) Rose Comb (RR pp) × Single Comb (rr pp)
 - b) Pea Comb (rr PP) × Single Comb (rr pp)
 - c) Rose Comb (RR pp) × Pea Comb (rr PP)Workout F₁ and F₂ generation.
 26. Explain the inheritance of:
 - a) ABO blood groups in man.
 - b) Haemophilia
 27. Write notes on:
 - a) Klinefelters syndrome
 - b) Cystic fibrosis.
 28. What are stem cells? Explain the types, sources and their applications.
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