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V Semester B.Sc. Degree Examination, March/April - 2022

ZOOLOGY

Environmental Biology and Ethology

(CBCS Scheme Freshers & Repeaters 2020-2021 onwards)

Paper: V



Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates:

- i) Answer should be completely in English.
- ii) Draw neat labelled diagrams wherever necessary.

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

1. Define synecology.
2. State the first law of thermodynamics
3. Name any two gases that cause global warming.
4. What are carbamates?
5. Define biomagnification.
6. What is nuclear energy?
7. What is remote sensing?
8. Define motivation.
9. What is acquired behaviour?
10. Define biological rhythm.

[P.T.O.]



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PART - B

II. Answer any five of the following

(5×3=15)

11. Define ecological niche. Mention any two types.
12. Write a note on polyclimax theory.
13. Differentiate between natality and mortality.
14. What are endangered species.
15. Write any three applications of remote sensing.
16. Give the components of reflex arc.
17. Write a note on bioluminescence.

PART - C

III. Answer any five of the following.

(5×5=25)

18. Explain multidimensional niche with example.
19. What is xerosere explain with example.
20. Give an account on acid rain and its impact on terrestrial environment and built environment.
21. Write a note on landfill.
22. Give an account on Physical and biological approaches of integrated pest management.
23. Explain trial and error method of learning.
24. Honey bees are social insects. Justify.

PART - D

IV. Answer any Two of the following.

(2×10=20)

25. Light is an abiotic factor. Discuss
26. Explain
 - a) Any two negative interspecific interaction with example.
 - b) The Applications of GIS.



27. Discuss exsitu conservation of wildlife.

28. Write notes on

- a) Pheromones in vertebrates
 - b) Courtship behaviour.
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V Semester B.Sc. Degree Examination, March/April - 2022

ZOOLOGY**Genetics and Biotechnology**

(CBCS Scheme Freshers & Repeaters 2021 onwards)

Paper: VI**Time : 3 Hours****Maximum Marks : 70****Instructions to Candidates:**

- i) Answer should be completely in English.
- ii) Draw labelled diagrams wherever necessary.

PART - A**I. Answer the following questions in one word or one sentence.****(10×1=10)**

1. Define phenocopy
2. Name the cross in which F_1 offspring is crossed with recessive parent.
3. What are kappa particles?
4. Write the chromosomal complement of Down's syndrome.
5. What are allosomes?
6. Define artificial insemination.
7. Define Transgenesis.
8. What is somatic cell genetherapy?
9. What is the extra chromosomal DNA in bacteria called?
10. Expand RAPD.

[P.T.O.]



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PART - B

II. Answer any five of the following

(5×3=15)

11. Write a note on Norm of Reaction.
12. Explain Y-linked inheritance with an example.
13. Write a brief note on Albinism.
14. Distinguish between Euthenics and Euphenics.
15. Mention the role of the following molecular tools.
 - a) Restriction enzymes.
 - b) DNA ligase
 - c) Alkaline phosphatase.
16. What are Bioreactors? Mention any two applications of it.
17. List any three applications of Monoclonal antibodies.

PART - C

III. Answer any five of the following:

(5×5=25)

18. Define Multiple alleles? Give the genotypes of ABO Blood groups.
19. Note: Haemophilia is a X-linked recessive disease.

A man whose father was haemophilic marries a normal woman whose father was also haemophilic. What is the chance of haemophilia among their children?

Construct a Pedigree chart.

20. Write a note on Klinefelter's syndrome.
21. What are mutagens? Explain physical mutagens.
22. Give an account on polytene chromosomes.
23. What are stem cells? Explain its types.
24. Explain Knock-in technology in Mice.

**PART - D****IV. Answer any two of the following:****(2×10=20)**

25. Explain the law of independent assortment with a suitable example.
 26. Write a note on inheritance of :
 - a) Colour blindness in Man
 - b) Shell coiling in snail.
 27. Define sex-determination. Explain different types of sex-determination.
 28. Describe the steps involved in DNA finger printing. Add a note on its applications.
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