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V Semester B.Sc. Degree Examination, March/April - 2023

**ZOOLOGY**

**Environmental Biology and Ethology**

**(CBCS Scheme Fresher and Repeater 2018-19 Onwards)**

**Paper : V**



**Time : 3 Hours**

**Maximum Marks : 70**

**Instructions to Candidates:**

1. Draw a neat labelled diagram wherever necessary
2. Answer should be in English

**PART - A**

**I. Answer the following questions in one word or one sentence.**

**(10×1=10)**

- 1) Who coined the term Ecology?
- 2) Define microhabitat
- 3) Define population density.
- 4) What is Bio-Transformation?
- 5) What are chlorinated hydro carbons?
- 6) Explain IPM.
- 7) Give an application of remote sensing
- 8) Define behaviour.
- 9) What is communication?
- 10) Define Altruism.

**[P.T.O.]**



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**PART - B**

**II. Answer any Five of the following**

**(5×3=15)**

- 11) State the first law of thermodynamics with an example.
- 12) Explain hydrosere in brief.
- 13) Give any three causes for acid rain.
- 14) Write a note on Biomagnification.
- 15) What is red data book and mention its importance.
- 16) Explain motivation with an example.
- 17) Write a note on parental care in fishes.

**PART - C**

**III. Answer any Five of the following.**

**(5×5=25)**

- 18) Explain primary productivity in an ecosystem.
- 19) Write a note on monoclimax and polyclimax theory.
- 20) Explain the consequence of ozone layer depletion.
- 21) What are non-conventional energy resources? Mention the types and uses.
- 22) Discuss imprinting with an example.
- 23) Give the toxic effects of fungicides and herbicides.
- 24) Comment on echolocation in bats.

**PART - D**

**IV. Answer any Two of the following**

**(2×10=20)**

- 25) Write a note on :
    - a) Spatial niche.
    - b) Soil as an abiotic factor.
  - 26) Explain solid waste management.
  - 27) What is insitu conservation? Explain the types.
  - 28) Explain social behaviour in termites.
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V Semester B.Sc. Degree Examination, March/April - 2023

**ZOOLOGY****Genetics and Biotechnology****(CBCS Scheme F+R 2018-19 and Onwards)****Paper : VI****Time : 3 Hours****Maximum Marks : 70****Instructions to Candidates:**

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

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

- 1) Define allele.
- 2) In which ABO blood group, antigen is absent?
- 3) Give the pedigree symbol for normal male.
- 4) Write the chromosomal complement for Turner's syndrome.
- 5) Give an example for chemical mutagen.
- 6) Mention the function of DNA ligase.
- 7) What are bioreactors?
- 8) Name the technique in which semen is introduced into the female genital tract artificially.
- 9) What are monoclonal antibodies?
- 10) Expand RFLP.

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

- 11) What is test cross? Give the ratio of dihybrid test cross.
- 12) Write a note on erythroblastosis foetalis.

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- 13) Define
  - a) Cistron
  - b) Recon
  - c) Muton.
- 14) Distinguish between spontaneous and induced mutations.
- 15) Write a note on microinjection.
- 16) Give the significance of transgenesis.
- 17) List any three applications of PCR technique.

**PART - C**

**III. Answer any Five of the following. (5×5=25)**

- 18) Define monohybrid cross. Explain it with a suitable example.
- 19) In a legal case of disputed paternity, child belongs to blood group 'O', mother belongs to blood group 'O', Among the disputed males to whom paternity is attributed one belongs to blood group 'AB', while the other belongs to blood group 'A'. Who would be the real father and why?
- 20) Write a note on cystic fibrosis.
- 21) Give a brief account on gynandromorphs.
- 22) Explain CLB method of detection of mutations.
- 23) Write a note on super ovulation and embryo transfer.
- 24) Define gene therapy. Explain in -vivo and ex-vivo gene therapy.

**PART - D**

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

- 25) Explain:
    - a) Norm of reaction
    - b) Inheritance of kappa particles in Paramecium.
  - 26) What is multiple factor inheritance? Explain the inheritance of skin colour in man.
  - 27) Give an account on Genic Balance theory of bridges.
  - 28) What are stem cells? Explain the types, sources and their applications.
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