

FOUR YEAR B.Sc. DEGREE EXAMINATION, JANUARY - 2024

CHOICE BASED CREDIT SYSTEM

FIRST SEMESTER

PART - II

PAPER - I : INTRODUCTION TO APPLIED BIOLOGY

*(Common to Bio-Technology, Bio-Chemistry, Botany, Micro-Biology, Zoology
and Aqua Culture)*

(Under CBCS New Regulation w.e.f. the academic year 2023-24)

Time : 3 Hours

Max. Marks :75

SECTION -A

Answer any FIVE of the following questions. Each question carries equal marks.

(5×5=25)

1. Edward Jenner.
2. Structural characteristics of fungi.
3. Anabolism and Catabolism.
4. Monosaccharides.
5. Transgenic goat.
6. Plasmid vector.
7. Immunoblotting.
8. Polymerase Chain Reaction(PCR)
9. Tests of significance.
10. SWISSPROT

SECTION - B

Answer All questions. Each question carries equal marks.

(5×10=50)

11. a) Describe the contributions of Robert Koch and Louis Pasteur to field of microbiology.

(OR)

- b) Explain briefly about the organs of immune system.

12. a) Discuss the general characteristics and classification of proteins.

(OR)

- b) Write a note on structure of RNA, its types and functions.

13. a) What is transgenesis? How does stress tolerant plants are developed?

(OR)

- b) Write in detail about biopesticides and their advantages.

14. a) Write an essay on DNA finger printing.

(OR)

- b) Explain the methods of gene therapy and its application in treatment of various diseases.

15. a) Describe briefly about role of different biological databases.

(OR)

- b) Discuss about NCBI and genome work bench.
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[Total No. of Pages : 2]

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FOUR YEAR B.Sc. DEGREE EXAMINATION, JANUARY -2024**CHOICE BASED CREDIT SYSTEM****FIRST SEMESTER****PART - II****PAPER - I : INTRODUCTION TO CLASSICAL BIOLOGY***(Common to Bio-Technology, Bio-Chemistry, Botany, Micro-Biology,
Zoology and Aqua Culture)**(Under CBCS New Regulation w.e.f the academic year 2023-24)***Time : 3 Hours****Max. Marks :75****SECTION - A****Answer any Five of the following questions. Each question carries equal marks.****(5×5=25)**

1. Definition and concept of systematics.
2. Hot spots of India.
3. Photosynthetic pigments.
4. Ornamental foliage plants.
5. Phenylketonuria.
6. Significance of fertilization.
7. Concept of gene.
8. Law of segregation.
9. Scope of chemistry.
10. Vanderwaals forces, Coordinate bonds.

SECTION - B

Answer All questions. Each question carries **equal** marks.

(5×10=50)

11. a) Explain the important rules of binomial nomenclature and discuss its significance.

(OR)

- b) Define 'Ecosystem'. Write in detail about biotic components of ecosystem.

12. a) Describe briefly the steps involved in Krebs cycle.

(OR)

- b) Explain the fertilization and structure of dicot embryo.

13. a) Write an essay on structure and functions of pituitary hormones in mammals.

(OR)

- b) How do economic activities like sericulture and apiculture contribute to society?

14. a) Describe in detail the ultrastructure of Eukaryotic cell.

(OR)

- b) Briefly explain the theories of evolution.

15. a) Write about the scope and importance of chemistry in various industries.

(OR)

- b) Elaborate on the different types of chemical bonds, including hydrogen bonds.
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