



K25U 0188

Reg. No. :

Name :

Sixth Semester B.Sc. Degree (C.B.C.S.S. – OBE – Regular/Supplementary/
Improvement) Examination, April 2025

(2019 to 2022 Admissions)

CORE COURSE IN ZOOLOGY

6B09ZLG : Cellbiology, Immunology and Microbiology

Time : 3 Hours

Max. Marks : 40

- I. Essay questions. **Each** question carries 8 marks. Answer **any two**. (2×8=16)
- 1) Explain the differences between prokaryotic and eukaryotic ribosomes, their structure and functions.
 - 2) Discuss the structure of antibody with suitable diagram.
 - 3) Discuss the mechanisms of cell signaling with the receptors involved in it.
 - 4) Describe the phases of bacterial growth and the physical and chemical requirements for bacterial culture.
- II. Short Essay Questions. **Each** question carries 4 marks. Answer **any two**. (2×4=8)
- 5) Outline the structure and functions of the Golgi apparatus.
 - 6) Summarize the classification of fungi.
 - 7) Explain the significance of ELISA and RIA in immunological techniques.
- III. Short Answer Questions. **Each** question carries 2 marks. Answer **any six**. (6×2=12)
- 8) What are prions and how do they differ from viruses ?
 - 9) Define cell biology and mention its scope.
 - 10) What is the function of the nuclear pore complex ?
 - 11) Differentiate between heterochromatin and euchromatin.

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- 12) What is the function of mitochondria ?
 - 13) Mention two diseases caused by bacterial infections.
 - 14) What is meant by anaphylaxis ?
 - 15) Name two industrial products derived from microbes.
- IV. Multiple Choice Questions. **Each** question carries 0.5 marks. Answer **all**. (8×0.5=4)
- 16) Who proposed the modern cell theory ?
a) Schleiden and Schwann b) Watson and Crick
c) Singer and Nicolson d) Golgi
 - 17) Which of the following is a fixative used in histology ?
a) Hematoxylin b) Bouin's fluid
c) Neutral red d) Methylene blue
 - 18) Which class of antibody is involved in Type – I hypersensitivity reactions ?
a) IgA b) IgM c) IgG d) IgE
 - 19) The fluid mosaic model was proposed by
a) Singer and Nicolson b) Watson and Crick
c) Schleiden and Schwann d) Meselson and Stahl
 - 20) Which microorganism is responsible for tuberculosis ?
a) Mycobacterium tuberculosis b) Bacillus anthracis
c) Streptococcus pneumoniae d) Clostridium tetani
 - 21) Which staining method is used for electron microscopy ?
a) Hematoxylin b) Lead acetate
c) Neutral red d) Carmine
 - 22) What is the structural unit of chromatin ?
a) Centromere b) Nucleosome
c) Telomere d) Histone
 - 23) What is the role of stem cells ?
a) Immune defense b) Cellular respiration
c) Differentiation and repair d) Protein synthesis