



K20U 1560

Reg. No. :

Name :

V Semester B.Sc. Degree (CBCSS-Reg./Sup./Imp.)
Examination, November 2020
(2014 Admn. Onwards)
CORE COURSE IN ZOOLOGY
5B07ZLG : Cell Biology and Immunology

Time : 3 Hours

Max. Marks : 40

PART – A

- I. Answer **any one** of the following. (1×8=8)
- 1) Explain the Fluid mosaic model for the structure of Plasma membrane.
 - 2) With the help of diagrams, explain the process of meiosis.
- II. Answer **any one** of the following. (1×8=8)
- 3) Explain the functional variants of lysosomes and their function.
 - 4) Explain the molecular organization of nucleosome, mention euchromatin and heterochromatin.
- III. Answer **any two** of the following. (2×3=6)
- 5) Describe the different staining methods used in electron microscopy.
 - 6) Compare the chemical composition and structure of Prokaryotic and eukaryotic ribosomes.
 - 7) What are oncogenes ? Mention its role in cancer formation.
 - 8) Differentiate between prokaryotic and eukaryotic chromosomes.
- IV. Answer **any six** of the following. (6×1=6)
- 9) Balbiani rings.
 - 10) Gap junctions.
 - 11) Carnoy's fluid.
 - 12) Microtubules.
 - 13) Carcinogens
 - 14) Chiasmata
 - 15) Endomitosis.
 - 16) Electron transport chain.

P.T.O.



V. Answer **all** the following.

(4×1=4)

17) a) Which of the following is not present in 80S ribosomes ?

- | | |
|-------------|--------------|
| a) 28S rRNA | b) 23S rRNA |
| c) 5S rRNA | d) 5.8S rRNA |
- b) The histone, that is not the component of core particle.
- | | |
|--------|--------|
| a) H2A | b) H2B |
| c) H1 | d) H3 |
- c) Pairing of homologous chromosomes takes place during
- | | |
|--------------|---------------|
| a) Leptonema | b) Zygonema |
| c) Diplonema | d) Diakinesis |
- d) The secretory centre of the cell is
- | | |
|-----------------|---------------|
| a) Mitochondria | b) Lysosomes |
| c) Golgi bodies | d) Ribosomes. |

PART – B

Immunology

VI. Answer **any two** of the following.

(2×2=4)

- 18) Allergy
- 19) Graft rejection.
- 20) Acquired immunity
- 21) Rheumatic fever

VII. Answer **any one** of the following.

(1×4=4)

- 22) What is antigen-antibody interaction ? Describe the different types of interaction.
- 23) What is Major Histo-compatibility Complex ? Explain.