



Reg. No. :

Name :

III Semester B.Sc. Degree (CCSS – Supple./Imp.)

Examination, November 2016

CORE COURSE IN ZOOLOGY

(2009 Admission)

3B03ZLG : Cytology and Immunology

Time : 3 Hours

Max. Weightage : 25

SECTION – A

(Cell Biology)

I. Essay (answer **any one**). (Weight. 4)

- 1) What is cell cycle ? Explain the stages of cell cycle.
- 2) Explain the structure and functions of Golgi complex.

II. Essay (answer **any one**). (Weight. 4)

- 3) Account on the principle, working mechanism and applications of light microscopy.
- 4) Give an account on the structure and function of plasma membrane.

III. Short essay (answer **any three**). (Weight. 2 each)

- 5) Discuss on benign and malignant tumours.
- 6) Differentiate between prokaryotes and eukaryotes.
- 7) Discuss on the hypothesis about cancer.
- 8) Give an account on cell theory and its modern concept.
- 9) What is crossing over ? Write on its significance. (3×2=6)

IV. Short answers (answer **any four**).

(Weight. 1 each)

- 10) Explain giant chromosomes.
- 11) Define endomitosis.
- 12) What are peroxisomes ?
- 13) Comment on the use of oil immersion objective.
- 14) Name any two vital stains.
- 15) What are the functions of mitochondria ?
- 16) Give the significance of meiosis. (4x1=4)

V. Answer the following .

(Weight. 1 each)

- 17) a) _____ is the term for intake of solid substance into the cell.
- b) _____ micrometer is used in eyepiece.
- c) _____ is a white blood cell.
- d) _____ is the power house of the cell.

18) Match the following :

- | | |
|-----------------------------|---------------------|
| a) Zygotene | Electron microscopy |
| b) Lead acetate | Golgi complex |
| c) Thelytoky | Mitosis |
| d) Electron transport chain | Parthenogenesis |
| | Mitochondria |
| | Meiosis |

(2x1=2)



SECTION – B

Immunology

VI. Answer **any two** :

(Weight. 2 each)

- 19) Comment on agglutination.
- 20) Account on autoimmune reactions.
- 21) What are antibodies ? What are their functions ?
- 22) Distinguish between cell mediated and humoral immunity. (2x2=4)

VII. 23) Match the following.

(Weight. 1)

- | | |
|--------------------|-----------------------|
| a) Opsonisation | Autoimmune response |
| b) IgM | Incomplete antigens |
| c) Haptens | Antibody |
| d) Graves' disease | Complement system |
| | Cell mediate immunity |