



Reg. No. : .....

Name : .....

**III Semester B.Sc. Degree (CCSS-Supple./Improve)**  
**Examination, November 2015**  
**Core Course in Zoology**  
**3B03 ZLG : CYTOLOGY AND IMMUNOLOGY**  
**(2009 Admn.)**

Time : 3 Hours

Max. Weightage : 25

**Instruction :** Draw diagram *wherever* necessary.

**SECTION – A**  
**Cytology**

I. Answer **any one** (Wt. 4) :

- 1) Explain the structure and functions of plasma membrane.
- 2) Describe the structure of interphase nucleus with special reference to pore complex. (1×4=4)

II. Answer **any one** (Wt. 4) :

- 3) Give an account on connective tissue cells.
- 4) Explain the types of parthenogenesis. Comment on its significance. (1×4=4)

III. Answer **any one** (Wt. 2) :

- 5) Discuss on theories of aging.
- 6) Give an account on cell theory and its modern concept. (1×2=2)

IV. Answer **any four** (Wt. 2 each) :

- 7) Comment on the mycoplasma and viroids.
- 8) Describe briefly the principle and applications of micrometry.



- 9) Give an account on cytoskeleton and its importance.
- 10) What are microbodies ? What are their functions ?
- 11) Give an account on physical properties and functions of protoplasm.
- 12) Comment on the use of oil immersion objective.
- 13) Differentiate between prokaryotes and eukaryotes. (4×2=8)

V. Answer the following (Wt. 1 each) :

- 14) a) Methylene blue is a \_\_\_\_\_ stain.
- b) Name a stain used in electron microscopy.
- c) Component part of micrometer used in eye piece of a microscope is called \_\_\_\_\_
- d) Name a fixative.
- 15) Match the following :
 

a) Fluid mosaic model	:	Cell line
b) Eosin	:	Plasma membrane
c) Camera lucida	:	Mitosis
d) HeLa cells	:	Giant chromosome
	:	Sketching
	:	Stain

(2×1=2)

**SECTION – B**  
**Immunology**

VI. Answer any two (Wt. 2 each) :

- 16) Differentiate between cell active and passive immunity.
- 17) What is complement fixation ? Comment on its significance.
- 18) Illustrate the typical structure of an antibody.
- 19) Give a brief account on autoimmune reactions. (2×2=4)



VII. 20) Match the following :

(Wt. 1)

- |               |   |                        |
|---------------|---|------------------------|
| a) IgE        | : | Cell mediated immunity |
| b) Phagocytes | : | Incomplete antigens    |
| c) Haptens    | : | Antibody               |
| d) T Cells    | : | Basophil               |
|               | : | Bone marrow            |