



SS – 413

I Semester B.Sc. Examination, November/December 2018

(F+R/CBCS)

BIOTECHNOLOGY – I  
Cell Biology and Genetics



Time : 3 Hours

Max. Marks : 70

**Instruction :** Draw *neat* labelled diagrams *wherever* necessary.

SECTION – A

I. Write short notes on the following :

(5×2= 10)

- 1) Telomere.
- 2) Receptor proteins.
- 3) Chiasmata.
- 4) Germ cell.
- 5) Exocytosis.

SECTION – B

II. Answer **any four** of the following.

(4×5= 20)

- 6) Describe the structure of clover-leaf model of t-RNA, with a neat labelled diagram.
- 7) Define Apoptosis. Give an account of cell cycle stages in brief.
- 8) Write a note on Unit-membrane model.
- 9) Discuss the structure and functions of Prokaryotic Ribosome.
- 10) Describe the ultrastructure of chromosome.

P.T.O.



## SECTION – C

III. Answer **any three** of the following.**(3×10= 30)**

- 11) What is mutation ? What are the types ? Explain any two types in detail.
- 12) Define Cytoplasmic Inheritance. Add a note on Plastid Inheritance in *Mirabilis*.
- 13) Discuss any two Cytoskeletal elements in detail.
- 14) Describe the stages of meiosis with its significance.
- 15) Describe the structure and functions of lysosomes. Add a note on peroxisomes.

## SECTION – D

IV. Answer the following in a word or a sentence **each** :**(10×1= 10)**

- 16) The organelle that stores ATP.
  - 17) Expand NAD.
  - 18) Give an example of Epistasis.
  - 19) Define a gene.
  - 20) Name the cell wall component of yeast cells.
  - 21) Symport.
  - 22) Name any one microbody.
  - 23) What are nucleotides ?
  - 24) Where is glycogen stored in animals ?
  - 25) Dictyosomes.
-