

## Cell-Biology

Con. 8946-13.

(3 Hours)

(21)

GX-12170

[Total Marks : 80]

- N.B. :** (1) Question No.1 is compulsory.  
 (2) Attempt any three questions out of remaining 5 questions.  
 (3) Draw diagrams/figures wherever necessary.

1. Write short notes on four of the following out of 6 questions :— 20
  - (a) Functions of Cell.
  - (b) Osmosis.
  - (c) Vacuoles
  - (d) Necrosis.
  - (e) Ig Superfamily.
  - (f) Pinocytosis.
2. (a) Explain the structure of viruses. Enlist some important functions of viruses. 10  
 (b) Explain in detail the mechanism of active transport. Support your answer with a diagram. 10
3. (a) What are cytoceptors ? In detail explain the process of exocytosis and endocytosis. 10  
 (b) Describe the process of signalling through G protein coupled receptors ? 10
4. Draw neat labelled diagram of the following :— 20
  - (a) Plant cell.
  - (b) Golgi Apparatus.
  - (c) Endoplasmic Reticulum.
  - (d) Prophase I of meiosis.
5. (a) What is tumor ? Explain characteristics of growing tumor cells. 10  
 (b) Cell adhesion molecules play an important role in cellular communication. Justify ? 10
6. (a) Differentiate between :— 10
  - (i) Necrotic and Pycnotic death.
  - (ii) Living cell and Dead cell.
- (b) Explain calcium independent cell adhesion in detail. 10