

**2015**

**(January)**

Full Marks : **40**

Time : **2** Hours

*Answer any five questions*

*All questions carry equal marks*

**( CELL BIOLOGY )**

1. Briefly explain the molecular organization of plasma membrane with emphasis on its functions ?
  2. Write short notes on the following :
    - (a) Nucleosome
    - (b) Cytoskeleton
  3. What is cell cycle ? Describe the events of cell cycle with a note on its regulation.
  4. Write short notes on the following :
    - (a) Ion transport across the membrane
    - (b) Endocytosis
  5. Write down the temporal and spatial gene expression during and its regulation during growth and development in *Drosophila*.
  6. Briefly explain the role of second messenger in Cell-cell signaling with suitable examples.
  7. Differentiate between :
    - (a) Excrne and Endocrne Signalling
    - (b) Apoptosis and Necrosis.
  8. Briefly explain the structure and mechanism of action of tumor suppressor genes with examples.
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