

January, 2017
CELL BIOLOGY

Time : Two Hours]

[Maximum Marks : 40

Answer any five questions. The questions are of equal value.

1. Give an account of structural organization and function of mitochondria.
2. Discuss the various check points in cell cycle and describe the molecular events during cell-cycle.
3. Discuss how the macromolecules are transported across the cell membrane.
4. Write short notes on the following :
 - (a) G_1 protein
 - (b) Male gametogenesis
5. Describe the functions and mechanism of action of pRB and $p53$ tumor suppressor proteins.
6. Write short notes on the following :
 - (a) Fluid mosaic model
 - (b) Functions of glycoconjugates

7. Differentiate between :

- (a) Cilia and flagella
- (b) Extracellular and intracellular fertilization

8. Write short notes on the following :

- (a) Viral oncogenes
- (b) Chloroplast genome