



HEF-003-1181001 Seat No. _____

M. Sc. (Zoology) (Sem. I) (CBCS)

(W.E.F. 2016) Examination

November / December – 2017

ZOOL - 101 : Cell Biology

Faculty Code : 003

Subject Code : 1181001

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer the following very briefly : (any **seven**) **2x7=14**

- (a) What is nuclear envelop?
- (b) What are giant chromosomes?
- (c) Name the components of cytoskeleton.
- (d) What is apoptosis?
- (e) What is chlorophill?
- (f) Write the functions of ribosomes.
- (g) Define ligand.
- (h) What is immunoglobulin superfamily?
- (i) What is symport?
- (j) Define cellular receptors.

2 Answer of the following : (any **two**) **7x2=14**

- (a) Describe the ultrastructure of chloroplast.
- (b) Write a note on the intermediate filaments (IF) and its role in the cell.
- (c) Describe the nucleosome and solenoid structure of chromosome.

3 Answer the following : **7x2=14**

- (a) Write a short note on the ultrastructure of nuclear pore complex.
- (b) Describe the process of endocytosis and its significance with suitable examples.

OR

3 Answer the following : **7x2=14**

- (a) Describe the main functions of junctions between the cells.
- (b) Write a short note on the structure and functions of apoptosome.

4 Answer the following : **7x2=14**

- (a) Describe the ultrastructure and functions of peroxisomes and glyoxisomes.
- (b) Give a short account of cell signaling molecules with examples.

5 Write short notes : (any **two**) **7x2=14**

- (a) Stages of cell-cell communication
- (b) Ultrastructure of mitochondria
- (c) Endocrine signaling
- (d) Structure and functions of lysosomes.