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JBD-003-1141001 Seat No. _____

M. Sc. (Botany) (Sem. I) (CBCS) Examination

December - 2019

BOT - 101 : Cell Biology

(New Course)

Faculty Code : 003

Subject Code : 1141001

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instruction : All questions are to be attended as per information.

1 Answer the following : (Any **Seven**) **14**

(a) What is cell wall?

(b) What is chromosome?

(c) What is microfillamemts?

(d) Draw the ultrastructure of vacuole

(e) What is antiport?

(f) What is cellular junctions?

(g) What is a ligand?

(h) What is apoptosome?

(i) What is cell drinking?

(j) Define apoptosis

2 Answer the following : (Any **Two**) **14**

(a) Give a detailed account of nuclear membrane and its importance.

(b) Review the cell concept by discussing principal levels of organization

(c) Give a comparative statement of polytene and lampbrush chromosomes.

3 Answer the following (Compulsory Questions) **14**

(a) Describe the structure, chemical nature and functions of peroxisomes.

(b) Describe the photosynthetic units and reaction centers in chloroplast

OR

3 Answer the following (Compulsory Questions) 14

(a) Give a detailed account of cell adhesion

(b) Give a detailed account of Na+,K+channel

4 Answer the following : 14

(a) Give a detailed account of cell biological approach of cancer

(b) Give a detailed account of various kinds of cell surface receptors.

5 Answer the following : (Any **Two**) 14

(a) Describe G-protein linked receptors and their functions.

(b) Describe phagocytosis and pinocytosis.

(c) Describe the molecular structure of centrosome

(d) Describe the biogenesis of mitochondria and its role in cellular energetics.