Seat No. _____

HN-003-1132001

M. Sc. (Biotech) (Sem. II) (CBCS) Examination

April - 2023

BT - 206 : Molecular Cell Biology

Faculty Code : 003

Subject Code : 1132001

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

1 Answer the following : (any **seven** out of ten, each of 2 marks) **14**

(1) What is loss of function mutation?

(2) What is check point?

(3) Enlist secondary messengers.

(4) Define the term "coagulative necrosis".

(5) Define the tumour and its type.

(6) What is apoptosis?

(7) What is function of tropomyosin in microtubules?

(8) What is role of kinetochore in cell division?

(9) Give Role of sperm antigen.

(10) What is the role of polar and chromosomal spindle microtubules?

2 Answer the following : (any **two** out of three, each of 7 marks) **14**

(a) Describe the event occur during cytokinesis in typical plant.

(b) Describe the steps involved in signal transduction.

(c) What is G Protein? Write the ON and OFF mechanism of G Protein effectors.

3 Answer the following : (each of 7 marks) **14**

(a) What is Necrosis ? Describe.

(b) Describe the extrinsic pathways for apoptosis.

OR

3 Answer the following (each of 7 marks) **14**

(a) Describe in detail "Cell locomotion".

(b) Described in detail muscles contraction.

4 Answer the following : (each of 7 marks) **14**

(a) What is differentiation? Describe.

(b) Explain in vitro fertilization.

5 Answer the following : (any **two** out of four, each of 7 marks) **14**

(a) Write a short note on causes of cancer.

(b) Explain oncogene and ERK signaling pathway.

(c) Describe retroviruses to cause cancer.

(d) Write a note on mechanisms of SV4O virus in cancer.
