



**PAQ-003-013201**

Seat No. \_\_\_\_\_

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

**August / September - 2020**

**BT-207 : Molecular Cell Biology**

**Faculty Code : 003**

**Subject Code : 013201**

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

[Total Marks : 70

- 1** Answer the following : (Any **Seven** out of Ten, each of 02 marks) **14**
- (1) What is apoptosis?
  - (2) Enlist secondary messengers.
  - (3) Define the term "coagulative necrosis".
  - (4) What is check point?
  - (5) What is the function of Tropomyosin in Microtubules?
  - (6) Give Role of sperm antigen.
  - (7) Define the term "Fertilization".
  - (8) What is loss of function mutation?
  - (9) Define the term Proto-oncogene'.
  - (10) What is role of Kinetochore in cell division?
- 2** Answer the following : (Any **Two** out of Three, each of 07 marks) **14**
- (a) What is G Protein? Write the ON and OFF mechanism of G Protein effectors.
  - (b) Describe the steps involved in signal transduction.
  - (c) What is meiosis? Write the steps involved during meiosis.
- 3** Answer the following : (Each of 07 marks) **14**
- (a) Describe in detail "Cell locomotion"
  - (b) Write a note on the factor affecting the regulating Apoptic death in normal cells.

**OR**

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- 3** Answer the following : (Each of 07 marks) **14**
- (a) Describe centriole and its dynamic roles in cell division.
  - (b) What is Necrosis? Describe.
- 4** Answer the following : (Each of 07 marks) **14**
- (a) Discuss the events during Fertilization and provide a brief account on the Post Fertilization.
  - (b) What is differentiation? Describe.
- 5** Answer the following : (Any **Two** out of four, each of 07 marks) **14**
- (a) Explain the treatment of cancer.
  - (b) Write a short note on retroviral oncogene
  - (c) Explain oncogene and ERK signaling pathway.
  - (d) Explain the Ras oncogene pathway in detail.
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