

**PD-272 CV-19**  
**(552) M.Sc. ZOOLOGY (SECOND SEMESTER)**  
**Examination JUNE- 2021**  
**Compulsory/Optional**  
**Group -**  
**Paper - III**

Name/Title of Paper- MOLECULAR CELL BIOLOGY  
Time:- Three Hours

Maximum Marks- 080  
Minimum Passing Marks-029

Note: Answer From Both the Section as Directed. The Figures in the right-hand margin indicate marks.

**Section-A**

(1) Answer the following question Briefly:- 1x10

- a. What is negative regulation of apoptosis?
- b. At what stage does transcription end?
- c. Name any two single membrane borend organelles.
- d. Name the principal protein of cillia and flagella.
- e. Give an example of Symporter.
- f. What are polysomes.
- g. What is Ageing?
- h. Which cell organelle plays a crucial role in detoxifying many poison and drugs in a cell?
- i. Draw well labelled diagram of a giant chromosome.
- j. In which phase of the cell cycle does DNA replication occur?

(2) Answer the following questions:- 2x5

- a. What is transposon and why is it important?
- b. What are different types of ATP driven pumps?
- c. Define ion-channel. What are the main types of ion-channel?
- d. What are the major types of cell signalling?
- e. What are non-sense codon? Why are they termed so?

**Section-B**

15x4

(3) What are the different modifications of plasma membrane that make the plasma membrane special? And how?

Or

Explain the different types of diffuse during cell membrane transport.

(4) Explain in detail the role of kinesin and dynein during intracellular transport.

Or

Explain signal transduction mechanism.

(5) Explain cell cycle check points.

Or

Describe cell-matrix adhesion.

(6) Explain Biology of cancer.

Or

Explain the molecular mechanism of DNA Replication.