

PC - 272 CV-19  
(552) M.Sc. ZOOLOGY (SECOND SEMESTER)  
Term End Examination JUNE 2020

Compulsory/Optional Group Paper - III MOLECULAR CELL BIOLOGY

Time : Three Hours]

[Maximum Marks : 080

[Minimum Pass Marks :029

नोट:- दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं। Note: Answer From Both the Section as Directed. The Figures in the right-hand margin indicate marks.

SECTION - A

1X10

1. Answer the following question Briefly -

- Give the example of Antiport transport.
- Name the basic protein present in Micro-filament and microtubule.
- What is Kinetochore? Write its function.
- Define Cell-Signaling.
- How many H<sup>+</sup> ions are translocated from the matrix across the inner membrane per electron pair flowing from FADH<sup>2</sup> and NADH to O<sup>2</sup>.
- Which organelle is called protein factory of the cell and Why?
- Name the different type of giant chromosomes.
- What is transposon?
- Name the any two enzymes used in DNA replication.
- Define - Osmosis.

2x5

2. Answer the following questions -

- What is Aquaporin?
- What is MTOC? Give example.
- Define oxidative phosphorylation.
- Define aging.
- Give the home and their function of microtubule based motor protein.

SECTION - B

3. Write about the chemical composition of plasma membrane.

OR

What is ATP-Powered pump? Explain the different classes of ATP-Powered pumps with suitable example.

4. Write in detail on role of micro-tubule in mitosis.

Or

Write about the Structure and dynamics of microtubule.

5. Discuss in detail about different type of cell-cell adhesion molecules.

Or

Write the Structure and function of mitochondria.

6. What do you understand by protein trafficking? Explain the Uptake of protein into mitochondria.

Or

What is apoptosis? Write its mechanism and Significance.

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