

2 ½ Hours

Total Marks: 75

1. All questions are **compulsory**.
2. All questions carry **equal** marks.
3. Draw **neat, labelled diagrams** wherever necessary.

Q.1 A) Name the following:(any three)**03**

- 1 Monomer of Microfilament.
- 2 MAP.
- 3 Disorders associated with Unconventional Myosin.
- 4 Nucleating protein.
- 5 The movement of cargo from synapse to cell body.
- 6 When the growing and the shrinking microtubules can coexist in the same region of a cell.

B) Answer in brief: (any two)**12**

1. Explain the Structure and composition of Microtubules.
2. Explain the role of Dynein in Intracellular motility.
3. Explain assembly and disassembly of Microfilaments.
4. Explain the sliding Filament model of Muscle contraction.

Q. 2A) Explain the following terms: (any three)**03**

- 1 Hypotonic.
- 2 Symport.
- 3 Carriers.
- 4 Connexin.
- 5 Sphingolipids.
- 6 GAGs.

B) Give an account of: (any two)**12**

1. General functions of Plasma Membrane.
2. Membrane proteins.
3. Co-transport of Glucose and Sodium.
4. Functions of cell coat.

Q. 3A) Do as directed: (any three)**03**

- 1 Give the significance of coagulase in *S.aureus*.
- 2 Explain the term - PPD.
- 3 Fill in the blank- _____ is an intermediate host of malarial parasite.
- 4 Write True or False: A titre of 1/100 or more for O antigen is significant.
- 5 Name one enrichment media for Salmonella.
- 6 Give an example of a drug active against HIV.

B) Attempt the following: (any two)**12**

1. Elaborate on the pathogenesis of HIV.
2. How would you diagnose the case of typhoid with the help of serology?
3. Discuss on the various prevention and control methods for TB.
4. Explain the Tinea infections caused by Dermatophytes.

Q. 4 A) Explain the following terms: (any three)

03

- 1 Minus stranded RNA.
- 2 Burst size.
- 3 Viral haemagglutination.
- 4 Prions.
- 5 Plaque.
- 6 MOI.

Q.4 B) Give an account of the following: (any two)

12

1. One step growth experiment and its significance.
2. Criteria for classification of viruses.
3. Purification methods of viruses.
4. Life cycle of an influenza virus.

Q. 5 Write short notes on the following: (any three)

15

- 1 Role of cytoskeleton in a cell.
- 2 Desmosomes.
- 3 Life cycle of Plasmodium in definite host.
- 4 Virulence factors of *E.coli*.
- 5 Cultivation of viruses.
- 6 Mechanisms of host cell damage by the viruses.
