

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. All questions carry equal marks.
 3. Draw a neat labelled diagram wherever necessary.

- Q.1. a.** Give an example of **any one** of the following: **01**
- i. Intermediate filament
 - ii. Actin capping protein
- b.** Explain **any one** term **02**
- i. Protofilament
 - ii. Nucleation
- c.** Comment on **any two** of the following : **12**
- i. MTOCs and their role in the formation of microtubules
 - ii. Basic structure and assembly of intermediate filaments
 - iii. Structure of myosin and its role in muscle contractility
 - iv. Functions of cytoskeleton
- Q.2. a.** Define **any three** of the following : **03**
- i. Membrane fluidity
 - ii. Transmembrane proteins
 - iii. GAGs
 - iv. Connexin
 - v. Facilitated diffusion
 - vi. Pumps
- b.** Discuss **any two** the following : **12**
- i. Types of membrane lipids
 - ii. Symport with the help of an example
 - iii. Structure and role of Desmosomes
 - iv. Cell coat and its functions
- Q.3. a.** Do as directed **any three** of the following : **03**
- i. Name one toxin mediated disease of *S.aureus*.
 - ii. Explain A/E histopathology.
 - iii. Fill in the blank - HIV contains _____ enzyme which helps in converting RNA to DNA.
 - iv. Name one media used to culture *M. tuberculosis*.
 - v. Write True or False: Widal test can be performed in the first week of illness to detect typhoid fever.
 - vi. Give one example of an antimalarial drug.

- b.** Attempt **any two** of the following : **12**
- i. Explain the pathogenicity of HIV.
 - ii. Diagrammatically explain the life cycle of *Plasmodium* species.
 - iii. Explain the morphology, cultural and biochemical characteristics of *S.typhi*.
 - iv. Elaborate on the chemotherapy for TB management.
- Q.4. a.** Explain **any three** of the following : **03**
- i. Burst size
 - ii. Plus strand RNA
 - iii. Concatemers
 - iv. Prophage
 - v. MOI
 - vi. ICTV
- b.** Give an account of **any two** of the following : **12**
- i. Assay methods to enumerate viruses
 - ii. Plant virus reproduction
 - iii. General structure of a virus
 - iv. Life cycle of T even phage
- Q.5.** Write short notes on **any three** of the following : **15**
- i. Cutaneous mycoses
 - ii. Enterohaemorrhagic *E.coli*
 - iii. Cultivation of viruses
 - iv. Methods of purification of viruses
 - v. Microvilli
 - vi. Properties of microfilaments
