

[Time: 2:30 Hours]

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:

- i. Intermediate filament
- ii. Actin capping protein

01

b. Explain **any one** term

- i. Protofilament
- ii. Nucleation

02

c. Comment on **any two** of the following:

- 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

12

Q.2. a. Define **any three** of the following:

- i. Membrane fluidity
- ii. Transmembrane proteins
- iii. GAGs
- iv. Connexin
- v. Facilitated diffusion
- vi. Pumps

03

b. Discuss **any two** the following:

- 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

12

Q.3. a. Do as directed **any three** of the following:

- 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.

03



Q.P. Code : 19315

b. Attempt any two of the following :

- 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.

12

Q.4. a. Explain any three of the following :

- i. Burst size
- ii. Plus strand RNA
- iii. Concatemers
- iv. Prophage
- v. MOI
- vi. ICTV

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b. Give an account of any two of the following :

- i. Assay methods to enumerate viruses
- ii. Plant virus reproduction
- iii. General structure of a virus
- iv. Life cycle of T even phage

12

Q.5. Write short notes on any three of the following

- i. Cutaneous mycoses
- ii. Enterohaemorrhagic *E.coli*
- iii. Cultivation of viruses
- iv. Methods of purification of viruses
- v. Microvilli
- vi. Properties of microfilaments

15

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