QP Code : 77019

(2½ Hours) [Total Marks :75

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

1. (a) Give an example of any **one** of the following:- 1
   (i) Types of intermediate filament
   (ii) Durg affecting microtubule

   (b) Explain any **one** of the following:- 2
   (i) Anterograde movement
   (ii) Microfilament

   (c) Give an account of any **two** of the following:- 12
   (i) Microtubule polymerisation and the phenomenon of dynamic instability.
   (ii) Role of Actin binding proteins in Microfilament dynamics.
   (iii) Structure and function of motor protein myosin.
   (iv) Structure and composition of Intermediate filaments.

2. (a) Define any **three** of the following:- 3
   (i) Connexon
   (ii) Microvilli
   (iii) Channels
   (iv) Desaturases
   (v) Symporter
   (vi) Facilitated diffusion

   (b) Answer any **two** of the following:- 12
   (i) Outline the ways in which substances move passively across membrane.
   (ii) What are adherens junctions? Elaborate on its functions.
   (iii) Explain the classification of membrane proteins on the basis of relationship to the lipid bilayer
   (iv) Give an account of the functions of cell membrane.

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3. (a) Do as directed. Attempt any **three**:- 3
   (i) Name one selective media for *S. typhi*.
   (ii) Name the causative agent of Tinea versicolor.
   (iii) Fill in the blank. HIV contains two identical copies of _____ genome.
   (iv) Define Exoerythrocytic schizogony.
   (v) Give significance of PPD.
   (vi) Write True or False- Fibrinolysin that can dissolve fibrin clots is produced by *S.aureus*.

   (b) Attempt any **two** of the following:- 12
   (i) Give an account of the strains of *E.coli* that can cause gastroenteritis.
   (ii) Explain the lab diagnosis of enteric fever.
   (iii) Elaborate on the types of ringworm infections.
   (iv) Explain the treatment, prevention and control of HIV.

4. (a) Give significance of any **three** of the following:- 3
   (i) Protomers
   (ii) Envelope of a virus
   (iii) Tail fibres of bacteriophage
   (iv) Late mRNA
   (v) Haemagglutination assay
   (vi) Prions

   (b) Discuss any **two** of the following:- 12
   (i) Lysogeny in lambda phage
   (ii) Classification of viruses
   (iii) Cytocidal infections and cell damage
   (iv) Modes of entry of enveloped and naked virus into animal cell

5. Write short note on any **three** of the following:- 15
   (i) MDR-TB
   (ii) Clinical diseases caused by *S.aureus*
   (iii) One step growth experiment
   (iv) Viral enumeration
   (v) Dyneins as a transport protein
   (vi) Hyaluronic acid
