

2013

M.Sc.

2nd Semester Examination

MICROBIOLOGY

PAPER—VII (MCB-201)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer any two questions from each group.

Group—A

[Marks : 20]

Answer any two questions.

1. (a) Write the definition : 5×1
- (i) Anaphylaxis ;
 - (ii) Opportunistic pathogen ;
 - (iii) Adhesion ;
 - (iv) Invasin ;
 - (v) Exotoxin.
- (b) Describe in details about the stages of disease development. 5

(Turn Over)

2. (a) What is the hypervariable region of an antibody ?
(b) Write the specific function of IgD and IgM.
(c) 'The co-operation between B and T cells is very essential for antibody production' — Justify the statement.
(d) Describe the major functions of complement system in our body. 2+2+3+3
3. Write short notes on (any four) : $2\frac{1}{2} \times 4$
- (a) Cytopathic effects of viral infection ;
(b) B-antigen and its immunological roles ;
(c) Intracellular killing of pathogenic bacteria ;
(d) HLA antigen ;
(e) Immunological basis of pernicious anemia ;
(f) Mediators of delayed type hypersensitivity.

Group—B

[Marks : 20]

Answer any *two* questions.

4. (a) Give an outline of the structure of Pota virus along with its major structural components. Mention its invasion to host.
(b) Draw the genetic map of M13 and mention the functions of its different genes. 6+4

~~5.~~ Mention the criteria for classification of viruses. Depict the outline of plant virus classification as depicted by International Committee on Taxonomy of viruses (ICTV).

3+7

6. (a) What are prions? Who discovered it? Name two human diseases caused by prion. 2+2

(b) Write short note on : 3×2

(i) Acyclovir ;

(ii) Conjugated vaccine ;

(iii) Plaque Count.
