2018

M.Sc. 2nd Semester Examination

MICROBIOLOGY

PAPER—MCB-201

Subject Code—31

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

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

Illustrate the answers wherever necessary.

Group–A

[20 Marks]

Answer any *two* questions.

1. (a) Differentiate overt (primary) vs. opportunistic pathogens.

(b) Describe different stages of infections disease.

(c) Discuss briefly the cytopathic effects of viral infections.

2+5+3

2. (a) Describe the events of tissue repairing.

(b) State the structural components of plant that is essential for their defence.

(c) How specific resistance can be developed in plants by using the tools of genetic engineering.

3+4+3

3. Write short notes (any *four*) : $2\frac{1}{2} \times 4$

(a) Koch's postulates ;

(b) Phytoalexin ;

(c) Symptoms of endofoxin ;

(d) PR Proteins ;

(e) Horizontal vs. vertical disease resistance ;

(f) Invasins.

Group–B

[20 Marks]

Answer any *two* questions.

4. (a) What are the sub-population of T-hymphocytes ?

(b) Describe antigen processing and presentation by the antigen presenting cells.

(c) How do cytotoxic hymphocytes kill the target cell ?

2+5+3

5. (a) What non-specific receptors are involved in innate immunity ?

(b) Describe TLR by mentioning their specific PAMP and biological consequences.

(c) Components of classical pathway of complement activation. 2+6+2

6. Write short notes (any *four*) : $2\frac{1}{2} \times 4$

(a) MHC molecule.

(b) Corodinate intenaction between B and T cells for Ab production.

(c) What molecular fragments will be produced upon hydrolysis of immunoglobulin by the treatment of papain, pepsin and β-marcapto ethanol.

(d) Acute phase proteins.

(e) Oxygen dependent myeloperoxidase independent respiratory brust.

(f) Opsonization — process and importance.

———