2019

MSc

2nd Semester Examination

MICROBIOLOGY

PAPER – MCB-201

(Theory)

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.

Illustrate the answers wherever necessary.

Group A

[20 Marks]

1. Answer any ***TWO*** questions 2 X 2

   a. Define pathogen and its virulence . 1 + 1

   b. What are opportunistic pathogen and cite an example with property 1 + 1

   c. Name one host specific and non specific toxin. What is tabtoxin? 1 + 1

   d. What is phaseolin and name its producer. 1 + 1

2. Answer any ***TWO*** questions 4 X 2

a. Describe briefly about the cell wall degrading enzyme producing phytopathogen. 4

b. Define with example - 2 + 2

   i. congenital infections

   ii. HealthCare associated infections

c. What is adhesin and cite an example. State the types of hemolysin and Their role. 2 + 2

d. Describe briefly about the dimorphic nature of pathogenic fungi. 4

3. Answer any ***ONE*** question 8 X 1

a. What are mycotoxins? Distinguish between exo and endo toxins. Discuss the role of jasmonic acid in the development of systemic acquired resistance in plant. 2+3+3

b. Describe briefly about the stages of infections disease.What are cytopathic effects of viral infection? 5 + 3

Group B

[20 Marks]

4. Answer any ***TWO*** questions 2 X 2

   a. Compare the functional aspects of B and T cells.

   b. What do you mean by T-independent antigen?

   c. Compare must cells and basophils.

   d. State the hyper variable region of a immunoglobulin.

5. Answer any ***TWO*** questions 4 X 2

   a. What are the principal receptors involved in innate immune response. Write the types of non-specific receptor in this immune response. 2 + 2

   b. State the structure and function of IgM. 2 + 2

   c. Why is immune tolerance important for Survival of individual? 4

   d. Describe the composition and function of T-cell receptor. 2 + 2

6. Answer any ***ONE*** question 1 X 8

a. What are primary and secondary lymphoid organs? Describe the process of B-cell development with the expression of indicative marker proteins at different stages. (2+6)

b. Describe the mechanism for antigen processing and depict via MHC class I molecules. (8)