

2016

M.Sc.

2nd Semester Examination

MICROBIOLOGY

PAPER—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.

Illustrate the answers wherever necessary.

Answer any two questions from each group.

Group — A

[Marks : 20]

Answer any two questions

- 1. (a) Define pathogen and its virulence.**

(Turn Over)

- (b) Distinguish between endogenous and congenital infections.
- (c) Describe briefly the stages of any infectious disease.
- (d) How dimorphic behaviour of any fungi facilitate its pathogenesis. 2+2+4+2
2. (a) Discuss the induction of plant defense through RNA silencing by pathogen derived genes.
- (b) How hypersensitivity reaction is useful in plants defence ?
- (c) Describe the process of tissue repair in animal. 4+3+3
3. Write short notes on any four : 4×2½
- (a) Difference between exotoxin and endotoxin ;
- (b) Plantibodies ;
- (c) Horizontal and vertical resistance ;
- (d) Cytopathic effect of virus ;

- (e) Mycotoxins ;
- (f) Invasion of pathogens.

Group — B

[Marks : 20]

Answer any two questions :

4. (a) Illustrate in detail the overview of biochemical events involved in mast cell activation and degranulation.

5

- (b) Write a short note on ITAM motifs. Describe the mode of action of Der.P1)

3+2

5. (a) What are Gel and Coombs Classification of hypersensitivities? What are the effects of allergy shots on Allergen Specific antibodies.

- (b) Design an experiment to demonstrate that antigen processing is necessary for T_H -Cell activation? Mention the role of sialic acid in the regulation of complement activity?

(2+3)+(3+2)

6. (a) Illustrate the structural and functional characteristics of IgM. What are the subclass of T_H cells ?
- (b) What are T-dependent and T-independent antigens ?
Write the difference between hapten and immunogen.

$$(4+1)+(2\frac{1}{2}+2\frac{1}{2})$$
