

M.Sc. 2nd Semester Examination, 2023

MICROBIOLOGY

[Old & New]

PAPER – MCB-201.1 & 201.2

Full Marks : 40

Time : 2 hours

The figures in the right hand margin indicate marks

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

PAPER – MCB 201.1

(Host-Pathogen Interaction)

[Marks : 20]

A. Answer any *two* questions : 2 × 2

1. Define pathogen and virulence.

2. Distinguish between exotoxin and endotoxin.

3. What is adhesin ? Give example.
4. What are the components of extracellular matrix ?

B. Answer any *two* questions : 4 × 2

5. Distinguish between overt vs. opportunistic pathogens with suitable examples.
6. Describe the different sources of infectious diseases.
7. Describe the steps of wound healing.
8. State the cytopathic effect of virus infection.

C. Answer any *one* question : 8 × 1

9. Describe the characteristics of different phases of infectious disease.
10. Describe different factors that induced dimorphic nature of pathogenic fungi. How mycotoxins affect the host cell ?

PAPER – MCB 201.2

(*Immunology*)

[*Marks : 20*]

D. Answer any *two* questions : 2 × 2

11. What are the roles of primary lymphoid organ ?

12. Characterize macrophage cell highlighting structural and functional aspects.

13. State the different lineage of pluripotent cell division.

14. Mention the function of Treg cells.

E. Answer any *two* questions : 4 × 2

15. Describe the function of different types of immunoglobulins.

16. Describe role of TLR in innate immunity.

17. What are effector components of cytotoxic lymphocytes during attack to the target cell ?

18. What are the functions of complement fractions in immunity ?

F. Answer any *one* question : 8 × 1

19. Describe the process of antibody synthesis by cooperation of B and T cells.

20. Describe the oxygen dependent and independent mechanism of phagocytosis.
