

( 4 )

17. What are Complements and why are they so called? How complements are activated through the classical pathway? 1+3
18. What are the major receptors of innate immunity?

**GROUP—C**

Answer *any one* of the following questions :

8×1=8

19. How do class-I and class-II MHC molecules be differentiated with respect to antigen presentation to T-cell? Discuss critically the molecular mechanism of antigen processing and presentation of exogenous pathway with suitable diagram. 4+(3+1)
20. Describe the phagocytic mechanisms of macrophages by highlighting the free radicals mediated antigen killing.

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**2024**

**M.Sc. 2nd Semester Examination**

**MICROBIOLOGY**

**PAPER : MCB-201**

*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.*

*Illustrate the answers wherever necessary.*

*Answer from both the Units.*

**UNIT—A [201.1]**

**GROUP—A**

Answer *any two* of the following questions :

2×2=4

1. State the importance of Koch's Postulates.
2. What are the major characteristics of endotoxin?

( 2 )

3. What is squid melanin? Mention its importance.
4. Write the importance of prodromal phase during disease cycle.

**GROUP—B**

Answer *any two* of the following questions :

4×2=8

5. Describe the source of infectious agent.
6. Describe the stages of biofilm formation.
7. Describe the role of fibroblast in wound healing.
8. State the types of mycosis.

**GROUP—C**

Answer *any one* of the following questions :

8×1=8

9. Describe the classification of exotoxin considering their target of action.
10. Describe the typical damage patterns during virus infection.

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(Continued)

( 3 )

**UNIT—B [201.2]**

**GROUP—A**

Answer *any two* of the following questions :

2×2=4

11. What are primary and secondary lymphoid organs?
12. What are the characteristic features of dendritic cell and mast cell?
13. State the contribution of PAMP and PRR in innate immunity.
14. Distinguish between Th1 and Th2 cell.

**GROUP—B**

Answer *any two* of the following questions :

4×2=8

15. Describe the classification of macrophages.
16. Briefly describe the mechanism of generation of antibody diversity.

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(Turn Over)