

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

SMIC-323

M.Sc. (IIIrd Semester) Examination, 2021

MICROBIOLOGY

Paper - MB-304 (A)

(Immunology)

Time : 1½ Hours]

[Maximum Marks : 40

Section-A

(Marks : 1 × 10 = 10)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries
1 mark.

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer any *five* questions by selecting at least *one* question from each Unit
(Answer limit **200** words). Each question carries **3** marks.

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer any *three* questions by selecting *one* question from each Unit
(Answer limit **500** words). Each question carries **5** marks.

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(1)

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Section–A

1 each

1. Attempt all *ten* questions. Answer should not exceed **50** words in each question.
 - (i) Differentiate between Natural Passive Immunity and Artificial Passive Immunity.
 - (ii) What is Immunologic Memory ?
 - (iii) Define Hapten.
 - (iv) Differentiate between Exogenous and Endogenous Antigens.
 - (v) Compare Allograft and Isograft.
 - (vi) What is Cytotoxicity ?
 - (vii) Define Interferons and Interleukins.
 - (viii) Write a note on Recombinant Vector Vaccine.
 - (ix) What is Systemic Anaphylaxis ?
 - (x) What is a SCID Mouse ?

Section–B

3 each

Note :- Answer *five* questions in about **200** words, by selecting at least *one* question from each Unit. Each question carries **3** marks.

Unit–I

2. Write a note on mucosal associated lymphoid tissue.
3. What is Adaptive Immunity ?
4. Discuss the significance of inflammatory response in innate immunity.

Unit–II

5. Explain the properties of Cytokines.
6. Describe the pathways of complement activation.
7. Discuss generation of antibody diversity.

Unit-III

8. Discuss the mechanism of Graft Rejection.
9. Explain immunologic response towards bacterial infections.
10. Write short notes on the following :
 - (a) DTH
 - (b) Rheumatoid Arthritis

Section-C

5 each

Note :- Answer *three* questions in this Section, by selecting *one* question from each Unit in about **500** words. Each question carries **5** marks.

Unit-I

11. Write a comparative account on B-cell and T-cell epitopes.
12. Discuss the role of haematopoiesis in Immune System.

Unit-II

13. What is Antibody Affinity ? Differentiate between Precipitation Reaction and Agglutination Reaction using any *two* techniques.
14. Explain :
 - (a) Natural Killer Cells
 - (b) Antibody Classes

Unit-III

15. Write short notes on the following :
 - (a) Whole Organism Vaccines
 - (b) Experimental models in autoimmune disease
16. Discuss organ specific autoimmune diseases.