

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

SEM-3023

M.Sc. (IIIrd Semester) Examination, 2022

MICROBIOLOGY

Paper - MBEO-304 (A)

(Immunology)

Time : 3 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 *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 *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries **5** marks.

Section-A

1. (i) Define Immunogens.
- (ii) Name four secondary Lymphoid Organs.

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- (iii) Differentiate between Plasma cell and B cell.
- (iv) What are Interferons ?
- (v) Write *two* major functions of Cytokines.
- (vi) Define ADCC.
- (vii) Enlist *four* major functions of B-cells.
- (viii) Define Autoantibodies.
- (ix) What is Anaphylaxis ?
- (x) Give *two* examples of Primary Immuno-Deficiency diseases.

Section-B

Unit-I

- 2. Write a note on Innate Immunity.
- 3. Write a note on the contribution of Louis Pasteur in the field of Immunology.
- 4. What do you mean by Epitopes and Haptens ?

Unit-II

- 5. Write a short note on Antibody Dependent Cell Mediated Cytotoxicity.
- 6. Draw a well labelled diagram of IgG. Explain its structure.
- 7. Explain the role of cytokines in immune system.

Unit-III

- 8. Explain etiology of Erythroblastosis fetalis.
- 9. Write an explanatory note on vaccines.
- 10. Explain immune defence against bacterial pathogens.

Section-C

Unit-I

11. Write an explanatory note on Thymus and Lymph node.
12. What do you mean by Lymphocytes ? Explain in detail.

Unit-II

13. What do you mean by Major Histocompatibility Complex ? Write a note on MHC type II.
14. What is Complement ? Explain Classical Pathway of complement and its importance.

Unit-III

15. How is Asthma caused ? Explain.
16. Write an essay on autoimmunity.