

Roll No. :

Total No. of Questions : 11]

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BPF-2211

M.Sc. (Final) Examination, 2022

MICROBIOLOGY

Paper - VIII

(Medical Microbiology and Immunology)

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

2 each

1. (i) Define Pathogenicity.

(ii) What do you mean by Nosocomial Infections ? Name *two* common nosocomial infections.

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- (iii) Name *two* diseases each caused by bacteria in human and animals.
- (iv) Write *two* characteristics each of Rabies and Rinderpest.
- (v) What is agar well diffusion method ? Enlist its two uses.
- (vi) Enlist four functions of quorum signalling.
- (vii) Differentiate between Macrophage and Monocytes.
- (viii) Draw a well labelled diagram of IgG.
- (ix) Differentiate between antibody and autoantibody. Name two autoimmune diseases.
- (x) Write four different types of cytokines found in the body.

Section-B

2. Write a note on Normal microbial flora of human body and its significance. 5

Or

Write mechanisms of bacterial adherence and invasion to Cell or Tissue Surfaces. 5

3. Explain pathogenicity, diagnosis and treatment of Tuberculosis and Rabies. 2½+2½=5

Or

Write short notes on the following :

- (a) Foot and mouth disease
- (b) Anthrax 2½+2½=5

4. Explain general principle of Laboratory control of antimicrobial therapy. 5

Or

What is a Vaccine ? How does vaccine work ? Add a note on its schedule. 1+2+2=5

5. What are Lymphocytes ? Write a note on their role in immunity. 2½+2½=5

Or

Explain the basis of antibody classification. Write a note on structure and functions of various antibodies. 1+2+2=5

6. Explain the following :

(a) Antibody Dependent Cell Mediated Cytotoxicity

(b) Autoantibodies

$2\frac{1}{2}+2\frac{1}{2}=5$

Or

Write a note on classical pathway of Complement System.

5

Section-C

7. What is Nosocomial Infection ? Explain different types of Nosocomial Infections, Symptoms, Causes and their treatment.

1+9=10

8. With the help of suitable examples write a note on bacterial diseases of domestic animals.

10

9. Explain the principle of Quorum sensing and role of bacterial pheromones.

10

10. Explain the following :

(a) Structure and function of spleen

(b) Monoclonal antibodies

5+5=10

11. Write a detailed note on Transplantation

10