

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 6556

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Unique Paper Code : 2534001202

Name of the Paper : Microbes in Infectious Diseases (GE)

Name of the Course : **B.Sc. (Hons.) Microbiology**

Semester : II

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions. **All** questions carry equal marks.
3. Attempt **all** parts of a question together.

Q1 a. Describe various modes of transmission of the infectious agents. (6)

b. Explain the structure of an antibody molecule with the help of a suitable diagram. (6)

Q2. a. What are adjuvants? Enumerate any two modes of action of adjuvants. (4)

b. Comment upon the importance of skin and mucous membranes in preventing infections. (6)

c. Expand the following terms (**any two**): (1x2=2)

- i. LPS
- ii. NK cell
- iii. GALT

Q3. Differentiate between the following (**any four**): (3x4=12)

- a. Killed and Live Attenuated Vaccines
- b. Humoral and Cell mediated immunity
- c. Acute and Chronic infection
- d. IgG and IgM
- e. Primary and Secondary organs of immune system

P.T.O.

Q4. Match the following with the most suitable option:

(1x12=12)

- | | |
|-------------------|--------------------------|
| a. Anthrax | i. Paralysis |
| b. Tetanus | ii. Skin maceration |
| c. Polio | iii. Weight loss |
| d. Malaria | iv. Pandemic |
| e. AIDS | v. Neurotoxin |
| f. Dengue | vi. Nosocomial infection |
| g. Athlete's foot | vii. Water borne disease |
| h. Candida | viii. Eschar |
| i. Covid 19 | ix. Virulence factor |
| j. Hapten | x. Hemorrhage |
| k. Adhesin | xi. High fever |
| l. Amoebiasis | xii. Carrier protein |

Q5. State True or False citing suitable reasons for the following statements (any six): (2x6=12)

- Pulmonary tuberculosis may be transmitted by aerosols.
- Macrophages play an important role in innate immunity.
- Endotoxins are not pyrogenic.
- Secondary immune response is a heightened response occurring on re-exposure to antigen.
- IgA is not secreted in the body fluids such as tears.
- Soil can act as a reservoir for infectious agents.
- All antigens are immunogens

Q6. a. Define the following terms citing suitable examples wherever possible (any four):(2x4=8)

- Exotoxin
- Phagocytosis
- Subunit Vaccine
- Spleen
- Colonization

b. Describe various characteristics of an antigen that determines its immune response. (4)