

5385

Name of the Course : Microbiology
Semester : IV (UGCF) / II
Name of the Paper : Microbes in Infectious Diseases (GE)
Unique paper code : 2534001202

Duration: 2 hours

Maximum marks: 60

Instructions for Candidates

1. Write your number 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.

Set B

1. a) Explain the following terms, citing suitable examples (**any four**): (2x4=8)

- i) Hapten
- ii) Virulence factor
- iii) Immunogen
- iv) Adjuvant
- v) Prodromal phase

b) Give one important function of the following immune cells (**any four**): (1x4=4)

- i) Macrophages
- ii) Plasma cell
- iii) Memory cell
- iv) Dendritic cell
- v) Natural killer cells

2. Write symptoms and mode of transmission of **any three** diseases: (4 x 3=12)

- a) Tuberculosis
- b) AIDS
- c) Malaria
- d) Athlete's foot

3. (a) Differentiate between the following (**any two**): (4 x 2=8)

- i) Primary and secondary immune response
- ii) Natural and acquired immunity
- iii) Exotoxin and endotoxin

(b) Enlist the steps involved in the pathogenesis of an infectious disease. (4)

OR

Discuss the salient features of an antigen. (4)

4. (a) Discuss **any three** modes of indirect transmission of an infectious disease giving suitable examples. (6)

OR

Briefly explain **any three** types of infections giving suitable examples. (6)

(b) Name the causative agents of the following diseases (**any four**): (4)

- i) Amoebiasis
- ii) Histoplasmosis
- iii) Tetanus
- iv) Candidiasis
- v) Anthrax

(c) Is the entry of the pathogen in or on the host always necessary to cause an infectious disease? Justify. (2)

5. (a) Describe the mechanism of processing and presentation of an exogenous antigen. (4)

(b) Differentiate between immunization and vaccination. Discuss in brief **any two** types of vaccines citing suitable examples. (2 + 4=6)

(c) Expand the terms 'MALT' and 'ADCC'. (2)

6. (a) Discuss various types of immunoglobulins, and state their function. (6)

OR

What are secondary lymphoid organs? Draw a well labelled diagram of any primary lymphoid organ studied by you. (6)

(b) Differentiate between a reservoir and source of infection. Can they be the same in any infectious disease, justify? (3 + 1=4)

(c) What are the common modes of transmission of Covid 19? (2)