

Seat No. : _____

XB-130

Third B.Sc. (Annual)

March-2013

Microbiology Paper-VIII

(Immunology/Medical Microbiology)

Time : 3 Hours]

[Max. Marks : 70

- Instructions :** (1) Write the question numbers properly.
(2) Draw neat labelled figures where required.

1. (a) Answer as directed : (any **two**) **12**
- (i) Enlist the types of Immunity. Describe Innate Immunity.
- (ii) Justify – Immune response is of dual nature.
- (iii) What is an antigen ? What are the various types of antigen ?
- (iv) Describe briefly the various theories proposed to explain antibody diversity.
- (b) Answer in **a** line or **two** : **2**
- (i) What is the significance of adjuvant ?
- (ii) What is the difference between antigen and immunogen ? Mention only one difference.
2. (a) Attempt any **one** of the following :
- (i) Describe the lymphoid organs of immune system. **12**
- OR**
- Answer any **two** of the following : **12**
- (i) Describe MHC antigens.
- (ii) Explain the problems encountered during grafting of organs.
- (b) Answer in **a** line or **two** : **2**
- (i) What are the types of T cells ?
- (ii) Give two examples of immunosuppressive agents.

3. (a) Write a detailed note on any **two** of the following : **12**
- (i) Zone phenomenon
 - (ii) Alternate pathway of complement fixation
 - (iii) Precipitation type of immunological reaction
 - (iv) Schedule of vaccination as per WHO.
- (b) Answer in **a** line or **two** : **2**
- (i) What is opsonization ?
 - (ii) What is MLR ?
4. (a) Attempt any **two** of the following : **12**
- (i) What are the factors that affect the process of infection ?
 - (ii) Write a brief note on factors that affect the ability of invasion of a pathogen.
 - (iii) Explain the 'respiratory burst' occurring during phagocytosis and give its significance.
 - (iv) What is the significance of normal microbial flora of man and how can one prove their importance ?
- (b) Answer in **a** line or **two** : **2**
- (i) What is CPE ?
 - (ii) Give two examples of antimicrobial peptides produced by our body.
5. (a) Answer any **two** of the following : **12**
- (i) What are nosocomial infections ? Give their causes with suitable examples.
 - (ii) What are the etiology, symptoms, transmission and control methods of tuberculosis ?
 - (iii) What are the etiology, symptoms, transmission and control methods of dengue ?
 - (iv) What are the etiology, symptoms, transmission and control methods of rabies ?
- (b) Answer in **a** line or **two** : **2**
- (i) What is meant by frequency of diseases ?
 - (ii) Give two examples of fungi that cause superficial mycosis.