

Seat No. : _____

LF-108

April-2014

B.Sc. Sem.-VI

**CC-309 : Biochemistry
(Immunology and Bacterial Genetics)**

Time : 3 Hours]

[Max. Marks : 70

1. (a) Explain microbial enzymes as virulent factor. **8**
(b) State differences between Exotoxins and Endotoxins. **6**

OR

- (a) List various exotoxins and discuss mechanism of cholera toxin and Neurotoxin. **8**
(b) List various cells of immune system and state their functions. **6**

2. (a) What are complements ? Discuss the alternative pathway of complement activation. **7**
(b) Explain : Phagocytosis with a neat diagram. **7**

OR

- (a) Explain the structure of Immunoglobulin with diagram. **8**
(b) Discuss : Mechanism of action of Interferon. **6**

3. (a) What is ELISA ? List different types of ELISA and explain any one of them. **7**
(b) Write a note on type I hypersensitivity. **7**

OR

- (a) Explain hybridoma technique & state its applications. **7**
(b) Discuss complement fixation test and its uses. **7**

4. (a) Explain bacterial conjugation in details. **7**
(b) What is Hfr ? Discuss Hfr X F⁻ mating of bacteria. **7**

OR

- (a) Discuss transduction in detail. **9**
(b) Explain how the mapping of E.coli. chromosome is done. **5**

5. Answer the followings : **14**
- (1) Define : (i) Invasiveness (ii) Primary pathogen **2**
 - (2) List various portals of entry for microbes. **2**
 - (3) Define Hepten with an example. **2**
 - (4) What is complete & incomplete antigen ? **2**
 - (5) What is antibody titer ? **1**
 - (6) State the full form of RIA. **1**
 - (7) List various types of agglutination reactions. **2**
 - (8) How many types of immunoglobulin are there ? List their names. **2**
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