Seat No. : _____

MO-131

March-2019

B.Sc., Sem.-VI

CC-309 : Biochemistry

Time : 2:30 Hours] **[Max. Marks : 70**

Instructions : (1) **All** questions carry equal marks.
(2) Draw diagram wherever necessary.

1. (A) Discuss various cells and organs of immune system. **14**

OR

(i) What is the effect of followings on host system ? **7**
(1) Protein-A
(2) Hyaluronidase
(3) Fibrinolysis
(4) Leucocidin

(ii) Define endotoxins and discuss their mode of action. **7**

(B) Answer any **four** **4**
(1) Define Primary pathogen.
(2) What is LD_{50} ?
(3) Give examples of two exotoxins.
(4) List the portals of entry for microbes.
(5) What is the effect of HCHO and dilute acid on exotoxins ?
(6) Define : Toxoid.

2. (A) Discuss : The alternative and MBL pathways of complement activation. **14**

OR

(i) Discuss the mode of action of interferon. **7**
(ii) Explain : Phagocytosis. **7**

(B) Answer any **four** : **4**
(1) What is the function of lysozyme ?
(2) Define : Avidity
(3) What are haptains ?
(4) Draw and label precipitin curve.
(5) Which immune response is faster and why ?
(6) Name the immunoglobulin involved in classical pathway.

3. (A) Discuss the followings : **14**

(1) CFT.

(2) Agglutination inhibition

(3) RIA

OR

(i) Explain : Process of production of monoclonal antibodies. **7**

(ii) Discuss : Type III hyper sensitivity. **7**

(B) Answer any **three** : **3**

(1) What is passive immunization ?

(2) State one use of Immunoelectrophoresis.

(3) Define : Antibody titer.

(4) List two causative agents of Type IV hypersensitivity.

(5) Name two enzymes commonly used in ELISA.

4. (A) Define transduction. Explain generalized & specialized transduction. **14**

OR

(i) Explain : Hfr X F^- and F^+ X F^- **7**

(ii) Discuss : Transformation process in bacteria **7**

(B) Answer any **three** : **3**

(1) Define : Conjugation

(2) What is a prophage ?

(3) Name the scientists who discovered the process of conjugation.

(4) What is interrupted conjugation ? Where it is used ?

(5) What is auxotroph and prototroph ?