

7. (a) Describe the clinical significance of enzymes, lipase, amylase, SGOT, SGPT, LDH and CPK. 4
- (b) Discuss clinical significance of SGOT. 4
- (c) What are importance of SGPT ? Give its normal range. 4

OR

Explain in brief :

- (p) Hyperglycemia. 4
- (q) Glycogen storage disease. 4
- (r) Lipid malabsorption. 4

AP-529

B.Sc. (Part-III) Semester – VI Examination

6S : BIOCHEMISTRY

(Immunology and Clinical Biochemistry)

Time : Three Hours]

[Maximum Marks : 80

- Note :-** (1) **ALL** questions are compulsory and carry equal marks except Q.No. 1 which carry 8 marks.
- (2) Draw well labelled diagram wherever necessary.

1. (A) Fill in the blanks :

- (i) RIA stands for _____. $\frac{1}{2}$
- (ii) Serum sickness is an example of _____ type of hypersensitivity. $\frac{1}{2}$
- (iii) _____ is the pentamer antibody. $\frac{1}{2}$
- (iv) _____ instrument is used to measure the colour intensity of the reaction mixture. $\frac{1}{2}$

(B) True or false :

- (i) Anaphylaxis is an example of immediate types of hypersensitivity. $\frac{1}{2}$
- (ii) IgE is the only antibody that can cross the placenta. $\frac{1}{2}$
- (iii) Hapten is peritital antigen. $\frac{1}{2}$
- (iv) Passive immunity is readymade form of immunity. $\frac{1}{2}$

(C) Answer in **one** sentence :

- (a) What are monoclonal antibodies ? 1
- (b) Give long form of ELISA and CSF. 1
- (c) What is Normality ? 1
- (d) What are isoenzymes ? 1

- 2. (a) Describe basic structure of immunoglobulin. 4
- (b) Give structure and functions of IgM. 4
- (c) Mention properties of antibodies. 4

OR

Explain :

- (p) Factors required for antigenicity. 4
- (q) Natural passive immunity. 4
- (r) Humoral immunity. 4

- 3. (a) What is agglutination ? 4
- (b) Describe the various applications of agglutination. 4
- (c) Discuss complement fixation. 4

OR

Give a brief account of :

- (p) Radioimmuno assay. 4
- (q) Enzyme Linked immunosorbent assay. 4
- (r) Toxin-antitoxin reaction. 4

- 4. Discuss in detail the mechanism of classical pathway of complement. 12

OR

What is hypersensitivity ? Explain one example of each Type I, II, and III hypersensitivity. 12

- 5. Discuss in brief :
 - (a) Basic requirements of a clinical laboratory. 4
 - (b) Advantages of auto analyzer. 4
 - (c) Manual versus automation in clinical laboratory. 4

OR

- (p) Describe quality control. 4
- (q) Define standard solutions. How are they prepared ? 4
- (r) Give definition and scope of clinical Bio-chemistry. 4

- 6. Explain the following :
 - (a) Collection and preservation of biological fluids. 6
 - (b) Chemical analysis of blood and CSF. 6

OR

- (p) Clearance test for urea and its significance. 6
- (q) Commonly used SI units in clinical laboratories. 6