

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. Pharm. - SEMESTER-3 • EXAMINATION – SUMMER -2018**

**Subject Code: 2230003****Date: 04/05/2018****Subject Name: Pharmaceutical Chemistry-III (Biochemistry - I)****Time: 02:30 PM TO 05:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Discuss properties and chemical reactions of monosaccharides. **06**  
(b) How is galactose metabolized in our body? **05**  
(c) Explain transport mechanisms across the cell membrane. **05**
- Q.2** (a) Discuss synthesis of glucose in our body. **06**  
(b) What are carbohydrates? Write a note on polysaccharides. **05**  
(c) Describe HMP shunt with its significance. **05**
- Q.3** (a) Explain factors affecting enzyme activity. **06**  
(b) Classify enzymes with examples. **05**  
(c) Discuss role of hormones in maintenance of blood glucose level. **05**
- Q.4** (a) Write down reactions of fatty acid synthesis with its regulation. **06**  
(b) Define lipids. Discuss different tests to check purity of lipids. **05**  
(c) Discuss properties of triacylglycerol. **05**
- Q.5** (a) What are ketone bodies? Discuss its synthesis and overproduction. **06**  
(b) Discuss cholesterol synthesis in body. **05**  
(c) Define: (I) Reducing sugar (II) Glycogenesis **05**  
(III) Fatty acid (IV) Glycolysis  
(V) Apo enzyme
- Q. 6** (a) Discuss enzyme inhibition in detail. **06**  
(b) Discuss biochemical importance of calcium and iron in our body. **05**  
(c) Write a short note on following: **05**  
(I) Essential fatty acids (II) Water metabolism.
- Q.7** (a) Explain importance of vitamins as co-enzyme. **06**  
(b) Discuss control of lipid metabolism. **05**  
(c) Write a short note on following: **05**  
(I) Lipoprotein (II) Isoenzymes

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