

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 3- EXAMINATION –WINTER - 2018

Subject Code:BP303TP**Date: 06/12/2018****Subject Name: Biochemistry****Time:10:30 AM TO 01:30 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) Classify carbohydrates. Describe the structure and functions of polysaccharides. **06**
(b) Define following: **05**
i) Anomers ii) Enantiomers iii) Epimers iv) Invert sugar v) Mutarotation
(c) Write a note on TCA cycle with energetics. **05**
- Q.2** (a) Define following: **06**
Co-enzymes ii) Essential amino acid iii) Co-factor
Allosteric site v) Apoenzyme vi) Feedback inhibition of enzyme
(b) Discuss synthesis and significance of biological substances 5-HT and dopamine. **05**
(c) Discuss jaundice in detail. **05**
- Q.3** (a) Discuss in detail β -oxidation of saturated fatty acids with energetics. **06**
(b) Write a note on formation and utilization of ketone bodies. **05**
(c) Classify energy rich compounds and give significance of ATP. **05**
- Q.4** (a) Explain catabolism of phenylalanine and tyrosine. **06**
(b) Discuss the role of hormones in blood sugar homeostasis. **05**
(c) Define oxidative phosphorylation. Describe in detail substrate level phosphorylation. **05**
- Q.5** (a) Give biosynthesis and significance of Cholesterol. **06**
(b) Discuss following diseases: **05**
i) Atherosclerosis ii) Albinism
(c) Explain catabolism of heme. **05**
- Q. 6** (a) Discuss competitive and non competitive enzyme inhibition. **06**
(b) Discuss Michealis-Menten kinetic model for enzymes. **05**
(c) Explain in detail about the enzyme involved in biological oxidation. **05**
- Q.7** (a) Discuss Watson and Crick model of DNA structure. **06**
(b) Explain structure and functions of different types of RNAs. **05**
(c) Discuss purine nucleotides catabolism and Gout disease. **05**
