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: i) Anomers ii) Enantiomers iii) Epimers iv) Invert sugar v) Mutarotation	**05**
	(c)	Write a note on TCA cycle with energetics.	**05**
Q.2	**(a)**	Define following: Co-enzymes ii) Essential amino acid iii) Co-factor Allosteric site v) Apoenzyme vi) Feedback inhibition of enzyme	**06**
	(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: i) Atherosclerosis ii)Albinism	**05**
	(c)	Explain catabolism of heme.	**05**
Q. 6	**(a)**	Discuss competitive and non competitive enzyme inhibiton.	**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**

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