

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-III • EXAMINATION – WINTER -2019

Subject Code: BP303TP**Date: 19/11/2019****Subject Name: BIOCHEMISTRY****Time:10:30AM TO 01:30PM****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) Define and classify carbohydrate with suitable examples. Also explain biological role of carbohydrates. **06**
- (b) Define bioenergetics and give relationship between free energy, enthalpy and entropy and redox potential. **05**
- (c) Draw flow chart of Glycolysis – Pathway and discuss its energetics and significance **05**
- Q.2** (a) Write a note on Electron transport chain (ETC) and its mechanism **06**
- (b) Explain Oxidative phosphorylation & its mechanism. **05**
- (c) Give brief note on β -Oxidation of saturated fatty acid. **05**
- Q.3** (a) Discuss Biological significance of cholesterol and conversion of cholesterol into bile acids and vitamin D. **06**
- (b) Give a brief note on De novo synthesis of fatty acids **05**
- (c) Give a detail note on urea cycle and its disorders **05**
- Q.4** (a) Write a brief note on catabolism of heme and discuss hyperbilirubinemia **06**
- (b) Give brief note on Protein synthesis and inhibitors **05**
- (c) Draw the Structure of DNA and RNA and discuss their functions. **05**
- Q.5** (a) Give detail on regulation of enzymes. **06**
- (b) Define and classify enzyme. **05**
- (c) Discuss Enzyme inhibitors with examples **05**
- Q. 6** (a) Give Therapeutic and diagnostic applications of enzymes **06**
- (b) Give hormonal regulation of blood glucose level. **05**
- (c) Write in brief Gluconeogenesis- Pathway. **05**
- Q.7** (a) Define energy rich compounds and give its classification and biological significance. **06**
- (b) Give a brief note on Uncouplers. **05**
- (c) Write a brief on Enzyme kinetics **05**
