

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph.- SEMESTER-III • EXAMINATION – WINTER -2020

Subject Code:BP303TP**Date: 03/03/2021****Subject Name: Biochemistry****Time: 02:30PM TO 04:30PM****Total Marks: 54****Instructions:**

1. Attempt any THREE questions from Q-1 to Q-6.
2. Q.7 is compulsory to attempt.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

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|-------------|-----|--|-----------|
| Q.1 | (a) | Discuss Aerobic Glycolysis with energetic. | 06 |
| | (b) | Discuss the Synthesis of Glucose from Non-Carbohydrate sources. | 05 |
| | (c) | Write a note on citric acid cycle & explaining its amphibolic nature. | 05 |
| Q.2 | (a) | Discuss components and reactions of the electron transport chain. | 06 |
| | (b) | Define oxidative phosphorylation and discuss inhibitors of oxidative phosphorylation. | 05 |
| | (c) | Write a note on Glycogen Storage Disease. | 05 |
| Q.3 | (a) | What are carbohydrates? Give classification of carbohydrates with examples & function of it. | 06 |
| | (b) | (1) Differentiate Saturated and Unsaturated Fatty Acids. | 05 |
| | | (2) Define (i) Iodine number (ii) Saponification number (iii) Acid number | |
| | (c) | Define bioenergetics and discuss concept of free energy. | 05 |
| Q.4 | (a) | Discuss β -oxidation of fatty acids. | 06 |
| | (b) | What do you mean by ketone bodies? Discuss its formation and utilization. | 05 |
| | (c) | Discuss in detail Cholesterol Biosynthesis. | 05 |
| Q.5 | (a) | Write in brief Genetic code. Add a note on various inhibitors for protein synthesis. | 06 |
| | (b) | Define Enzyme. Give the brief classification of enzymes with suitable examples. | 05 |
| | (c) | Define Enzyme inhibition. Explain reversible and irreversible inhibition of enzyme. | 05 |
| Q. 6 | (a) | Write about reaction of Krebs-Henseleit cycle and enlist disorders of the cycle. | 06 |
| | (b) | Describe in detail transamination and deamination reactions for amino acids metabolism. | 05 |
| | (c) | Write in brief about atherosclerosis and jaundice. | 05 |
| Q.7 | (a) | Discuss in detail about purine biosynthesis. | 06 |
| | | OR | |
| | (a) | Discuss the Watson and Crick model of DNA structure. | 06 |
| | | OR | |
| | (a) | Describe in brief DNA replication. | 06 |