

GUJARAT TECHNOLOGICAL UNIVERSITY
Pharm D –Year -1• EXAMINATION – SUMMER - 2024

Subject Code: 818803**Date: 24/05/2024****Subject Name: Medicinal Biochemistry****Time: 10:30am to 01:30pm****Total Marks: 70****Instructions:**

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

- Q.1** (a) Describe the various reactions involved in HMP shunt. Write the significance of HMP Shunt. **06**
- (b) Write briefly on the different laboratory investigations employed to evaluate kidney function tests for NPN constituents. **04**
- (c) Define DNA Replication. Explain the role of DNA polymerase, DNA ligase and DNA helicase in the replication of prokaryotes **04**
- Q.2** (a) Write short notes on (Any Two) **06**
1. Facilitated transport
 2. High energy compounds
 3. Genetic code
- (b) Write a brief note on Lipoproteins. **04**
- (c) What is oxidative phosphorylation? Write about mechanism of oxidative phosphorylation. **04**
- Q.3** (a) Write about reaction of Krebs-Henseleit cycle with its metabolic disorders. **06**
- (b) Explain significance of metals and vitamins as co-enzymes. **04**
- (c) Define the following terms: **04**
- (i) Gluconeogenesis (ii) Atherosclerosis (iii) Fatty liver (iv) Jaundice
- Q.4** (a) Write a note on β -oxidation of fatty acid along with its energetic. **06**
- (b) Write a note on glycogen storage diseases. **04**
- (c) Write a short note on DNA repair mechanisms. **04**
- Q.5** (a) Classify enzymes. Describe the various factors affecting enzyme activity. **06**
- (b) Describe in detail transamination and deamination reactions for amino acids metabolism. **04**
- (c) Write a note on principle and applications of Radio-Immuno assay. **04**
- Q.6** (a) Describe the reactions involved in TCA Cycle. Explain amphibolic role of the cycle in detail. **06**
- (b) What are ketone bodies? Describe the reactions involved in ketogenesis. **04**
- (c) Define electrolytes. Outline a method for the determination of calcium and potassium in body fluids. **04**
- Q.7** (a) Discuss in detail components and enzymes involved in biological oxidation **06**
- (b) Describe in detail role of hormones blood glucose homeostasis. **04**
- (c) Write brief note on liver function tests. **04**