

# UKA TARSADIA UNIVERSITY

B.Pharm. (4th Semester)

Subject :030020403-Pharmaceutical Biochemistry

Duration : 3 Hours

Max. Marks : 70.

## Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

## SECTION - 1

**Q-1 (A) Do as directed.**

[07]

- I) Differentiate Ligases from Lyases.
- II) Define: Enzyme
- III) Write deficiency symptoms associated with Riboflavin and Vitamin C.
- IV) Differentiate passive diffusion and facilitated diffusion transport system.
- V) Justify: Enzymes are conveniently used as marker in the diagnosis of disease.
- VI) Explain in brief Pasteur effect.
- VII) Justify: Fluoroacetate regarded as a suicide substrate for Krebs Cycle.

[08]

**Q-1 (B) Answer the following in brief. (Any 4)**

- I) Disorder of Galactose metabolism
- II) Allosteric regulation of enzyme
- III) Cori cycle
- IV) Biochemical functions of Zinc
- V) Inhibitors of Electron Transport Chain
- VI) Regulation of gluconeogenesis

[10]

**Q-2 Answer the following.**

A) Glycogenolysis

OR

A) Active Transport across the cell membrane

B) Write a note on Citric Acid Cycle

OR

B) Biochemical functions and factors inhibit the absorption of Calcium

**Q-3 Answer the following in detail. (Any 2)**

[10]

- A) Hexose Monophosphate Shunt
- B) Regulation of enzyme activity
- C) Structure and biochemical functions of Vitamin A

## SECTION - 2

**Q-4 (A) Do as directed.**

**[07]**

- I) Write about  $\omega$  – oxidation of Fatty Acid.
- II) Give the name of enzyme that regulates urea synthesis by rate limiting reaction.
- III) Give the name of enzyme that catalyzed the conjugation of Bilirubin in liver.
- IV) Justify: DNA replication is semi-conservative, semi-discontinuous and bidirectional.
- V) Functions of DNA polymerase I and DNA polymerase II.
- VI) Justify: Glutamine is known as store house of ammonia.
- VII) Write about Energetic of urea cycle.

**[08]**

**Q-4 (B) Answer the following in brief. (Any 4)**

- I) Salvage pathway for purines
- II) Post translation of modification
- III) Transamination
- IV) Reverse transcription
- V) Regulation of Fatty acid synthesis
- VI) Integration between urea cycle and TCA cycle

**[10]**

**Q-5 Answer the following.**

- A)  $\beta$  - oxidation of Fatty acid

OR

- A) Biosynthesis of Porphyrin

- B) Krebs-Henseleit cycle

OR

- B) Synthesis and biochemical functions of Prostaglandins

**[10]**

**Q-6 Answer the following in detail. (Any 2)**

- A) Biosynthesis of Pyrimidine Ribonucleotide
- B) Replication of DNA
- C) Ketogenesis