

# GUJARAT TECHNOLOGICAL UNIVERSITY

## D.Pharm Year 2 EXAMINATION – WINTER-2023

**Subject Code: DP203TP**

**Date: 13/12/2023**

**Subject Name: Biochemistry & Clinical Pathology**

**Time: 10:30am to 01:30pm**

**Total Marks: 80**

**Instructions:**

1. Question -1 is compulsory to attempt.
2. Attempt any 04 questions from Question 2 to 7.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

- Q.1 Answer the following questions. (Attempt Any 16) (1 mark each) 16**
- 1) Define: Reducing sugar. Give its example.
  - 2) What is glycosuria?
  - 3) Give structure of cholesterol.
  - 4) Give synonym of vitamin A and B<sub>1</sub>.
  - 5) Name the enzymes required for iron functioning.
  - 6) Explain the term: Sickle cell anaemia.
  - 7) What are enzymes?
  - 8) Define: Glycogenolysis.
  - 9) What do you mean by metabolism?
  - 10) Define: Hyperglycemia.
  - 11) Name two forms of Vitamin K.
  - 12) What is alkeptonuria?
  - 13) What are the chemical constituents of seliwanoff's reagent?
  - 14) What do you mean by essential amino acids?
  - 15) Define: biotechnology.
  - 16) What is dehydration?
  - 17) What do you mean by oxidative phosphorylation?
  - 18) Explain biuret test.
  - 19) What is the normal number of WBCs in blood?
  - 20) What is rickets?
- Q.2 (a) Give synonym, different forms, physiological functions and deficiency diseases of vitamin D. 06**
- (b) What are proteins? Describe the structure of protein. 05**
- (c) Describe Electron Transfer Chain (ETC). 05**
- Q.3 (a) Enlist different liver function tests. Write down clinical significance of each test. 06**
- (b) Enlist different types of RNAs. Give structure and functions of each. 05**
- (c) Schematically describe citric acid cycle. 05**
- Q.4 (a) Discuss  $\beta$ -oxidation of fatty acids. 06**
- (b) Give mechanism of action of enzymes. 05**
- (c) Write a note on ORS therapy and ORS formulation? 05**

- Q.5** (a) Classify lipids with examples. Give biological importance of lipids. **06**  
(b) Write a note on scope and importance of biotechnology. **05**  
(c) Discuss reactions involved in urea cycle. **05**
- Q. 6** (a) Draw the cell structure & write the functions of each organelle. **06**  
(b) Give physiological functions of different minerals. **05**  
(c) Discuss different types of leucocytes. **05**
- Q.7** (a) What is glycolysis? Explain different chemical reactions and energetics of glycolysis. **06**  
(b) What are the physiological functions of water? **05**  
(c) Give biological importance of carbohydrates. **05**

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