

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Pharmacy First Year Examination May 2010

Subject code: 410004

Subject Name: Biochemistry and Clinical Pathology

Date: 22 /05 /2010

Time: 11.00 am-02.00pm

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 amino acid and give their classification. **05**
 - (b) State and explain the qualitative tests for protein. **06**
 - (c) Explain protein deficiency diseases. **05**
- Q.2**
- (a) Define Carbohydrates and give their classification with examples. **05**
 - (b) Give the principles of the following tests : **06**
 - 1) Molosch's test
 - 2) Benedict's test
 - 3) Osazone test
 - (c) What is mutarotation ? Explain Optical Isomerism. **05**
- Q.3**
- (a) Discuss the factors affecting ENZYME activity. **06**
 - (b) Explain "Lock and key model" and "Induce fit model" of enzyme action. **05**
 - (c) Write a note on enzyme inhibition. **05**
- Q.4**
- (a) Explain the role of lipid and give their classification with example. **06**
 - (b) Define and explain: **06**
 - 1) Saponification no.
 - 2) Acid value
 - 3) Iodine no.
 - 4) Acetyl no.
 - 5) Polenske no.
 - 6) Reichert meissel no.
 - (c) Explain the role of phospholipid in biological membrane **04**
- Q.5**
- (a) Describe TCA cycle. **06**
 - (b) Write a note on Embenden Meyerholf pathway of carbohydrate metabolism. **05**
 - (c) Explain β - oxidation of fatty acids. **05**
- Q. 6**
- Explain chemistry, sources, physiological function and deficiency manifestation of :
- 1) Vitamin A
 - 2) Riboflavin
 - 3) Vitamin D
 - 4) Iron
- Q.7**
- (a) Explain lymphocytes, platelets and their role in health and diseases. **06**
 - (b) Write a note on abnormal constituents of Urine and their significance in diseases. **05**
 - (c) Write a note on erythrocytes abnormality. **05**
