

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA PHARMACY – SEMESTER – I-EXAMINATION – WINTER 2015**

**Subject Code: 410004**

**Date: 10/12/2015**

**Subject Name: Biochemistry & Clinical Pathology**

**Time: 10:30 AM TO 1:30 PM**

**Total Marks: 80**

**Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
- 4.

- Q.1** (a) Define Proteins. Classify them with examples. Write its biomedical importance. **06**
- (b) Write notes on Mucopolysaccharides and proteoglycans **05**
- (c) Describe Glycolysis with its energetic. **05**
- Q.2** (a) Define and classify vitamins. Write chemistry, source, functions and deficiency of Vitamin D. **06**
- (b) Write functions of following : **05**
1. Iron
  2. Calcium
  3. Vitamin A
- (c) Discuss any two theories for biological action of enzyme. **05**
- Q.3** (a) Define enzymes. Classify it with suitable examples. Discuss factors affecting enzyme action. **06**
- (b) Write clinical importance of followings : **05**
1. SGOT
  2. ketone bodies
  3. Creatine.
- (c) Differentiate between : competitive & non-competitive inhibition **05**
- Q.4** (a) Describe TriCarboxylic Acid Cycle in detail with Energetics. **06**
- (b) Classify Aminoacids in detail and describe their chemical properties. **05**
- (c) What is Carbohydrate? Write detail about Qualitative tests of Carbohydrates. **05**

- Q.5** (a) What are lipids? Discuss briefly abnormal metabolism of lipids. **06**
- (b) Define lipoproteins. Classify it. Biomedical importance of lipoproteins. **05**
- (c) Write biomedical importance of cholesterol. Write detail notes on de novo synthesis of cholesterol. **05**
- Q. 6** (a) Give clinical significance of following abnormal constituents of urine. **06**
1. Glucose.
2. Blood.
3. Protein.
- (b) Write notes on role of Leucocytes and Lymphocytes in health. **05**
- (c) Describe deficiency disease of Proteins. **05**
- Q.7** (a) Write notes on protein Structure. **06**
- (b) Write notes on Glycogenolysis. **05**
- (c) Write chemistry, dietary source, functions and deficiency disorder of Vitamin-B<sub>1</sub>. **05**

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