

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc., Winter 2017-18 Examination

Semester: 5

Date: 26/12/2017

Subject Code: 11103301

Time: 2:00 pm to 4:30 pm

Subject Name: Clinical Biochemistry

Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Brief note. (08)**
- (a) Explain the biochemical basis of sickle cell anemia.
 - (b) Phenylketouria.
- Q.1. B) Answer the following questions (Any two) (04)**
- (a) Short note/ Brief note. (04)
 1. Hemophilia
 2. Name four Lipid storage disorders
 - (b) Renal Function tests (04)
 - (c) Thalassemias (04)
- Q.2. A) Answer the following questions. (04)**
- (a) Short note/ Brief note (04)
 1. Schistosomiasis
 2. Hyper parathyroidism
 - (b) Gout (04)
- Q.2. B) Answer the following questions (Any two) (03)**
- (a) Multiple choice questions. (03)
 1. Maple syrup urine diseases is an inborn error of metabolism of;

(A) Sulphur-containing amino acids	(B) Aromatic amino acids
(C) Branched chain amino acids	(D) Dicarboxylic amino acids
 2. Renal glycosuria occurs due to;
 - (A) Increased filtration of glucose in glomeruli
 - (B) Increased secretion of glucose by renal tubular cells
 - (C) Decreased reabsorption of glucose by renal tubular cells
 - (D) Increased conversion of glycogen into glucose in tubular cells
 3. An important feature of Zellweger's syndrome is;
 - (A) Hypoglycemia
 - (B) Accumulation of phytanic acid in tissues
 - (C) Skin eruptions
 - (D) Accumulation of C26-C38 polyenoic acid in brain tissues
 - (b) hyperthyroidism & hypothyroidism (03)
 - (c) Systemic lupus erythematosus (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
- (a) Write the difference between Type I & II Diabetes mellitus
 - (b) Which are the tests to be done to find out the proper function of liver & Describe in detail
- Q.3. B) Answer the following questions (Any two) (04)**
- (a) Brief note. (04)
 1. Leucopenia
 2. Hypoglycemia
 - (b) Porphyrias (04)
 - (c) Mention the disorders of carbohydrate metabolism & Explain. (04)

Q.4. A) Answer the following questions.

(a) Brief note. **(04)**

1. Thrombocytopenia
2. Normal function of parathyroid

(b) Glucose tolerance test **(04)**

Q.4. B) Answer the following questions (Any two)

(a) Multiple choice questions. **(03)**

1. All the following statements about albinism are correct except;

- (A) Tyrosine hydroxylase (tyrosinase) is absent or deficient in melanocytes
- (B) Skin is hypopigmented
- (C) It results in mental retardation
- (D) Eyes are hypopigmented

2. Inulin clearance in an average adult man is about;

- | | |
|----------------|----------------|
| (A) 54 ml/min | (B) 75 ml/min |
| (C) 110 ml/min | (D) 130 ml/min |

3. Alkaptonuria occurs due to deficiency of the enzyme:

- | | |
|---|-----------------------------------|
| (A) Maleylacetoacetate isomerase | (B) Homogentisate oxidase |
| (C) p-Hydroxyphenylpyruvate hydroxylase | (D) Fumarylacetoacetate hydrolase |

(b) Hemoglobinopathies **(03)**

(c) Adenosine deaminase deficiency **(03)**