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18BT46

## Fourth Semester B.E. Degree Examination, July/August 2022 Clinical Biochemistry

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. What is gluconeogenesis? With a neat schematic pathway, explain gluconeogenesis. (10 Marks)  
b. What is pentose phosphate pathway? Explain the oxidative phase of pentose phosphate pathway. (10 Marks)

OR

- 2 a. What is  $\beta$  oxidation? Explain the pathway with a schematic flow diagram, highlighting the enzymes and cofactors. (10 Marks)  
b. Write short note on :  
(i) Structure of cholesterol  
(ii) Degradation of triglycerides (10 Marks)

### Module-2

- 3 a. Diabetes Mellitus is a syndrome. Justify the statement. (10 Marks)  
b. Give an account of various glucose tolerance tests. (10 Marks)

OR

- 4 a. What is HDL cholesterol? Discuss the role of HDL cholesterol in antiantherosclerosis. (10 Marks)  
b. Write short notes on:  
(i) Apolipoproteins  
(ii) Multiple sclerosis (10 Marks)

### Module-3

- 5 a. Briefly explain the catabolism of phenylalanine. (10 Marks)  
b. Write short notes on :  
(i) Transamination  
(ii) Importance of nucleotides. (10 Marks)

OR

- 6 a. Discuss the pathway which is involved in the removal of ammonia in humans. (10 Marks)  
b. Describe the salvage pathway of purine nucleotides. (10 Marks)

### Module-4

- 7 a. What is tyrosinemia? Explain the pathophysiology of tyrosinemia. Add a note on the biochemical basis of tyrosinemia. (10 Marks)  
b. Write short notes on:  
(i) Albinism  
(ii) Gout (10 Marks)

OR

- 8 a. Briefly discuss the various hormones of anterior pituitary. (10 Marks)  
b. Give an account on thyroid dysfunctions. (10 Marks)

**Module-5**

- 9 a. Discuss the assessment and clinical manifestations of pancreatic functions. (10 Marks)  
b. Describe the clinical importance of bilirubin. (10 Marks)

OR

- 10 a. Give the clinical significance of :  
(i) Creatine kinase (10 Marks)  
(ii) Lactose dehydrogenase (10 Marks)  
b. Discuss the various enzyme tests of myocardial infarctions. (10 Marks)

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