CBCS SCHEME

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18BT46

Fourth Semester B.E. Degree Examination, Dec.2023/Jan.2024
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 Oxidative phosphorylation? Briefly explain the process of electron flow through electron transport chain. **(10 Marks)**

b. Illustrate the gluconogenetic pathway highlighting the irreversible reactions. Add a note on its regulation. **(10 Marks)**

OR

2 a. What is β – oxidation? With a schematic diagram, explain β – oxidation. How many acetyl COA molecules are produced when palmitate undergoes β - oxidation. **(10 Marks)**

b. Write short notes on :
i) Starch biosynthesis ii) Cholesterol structure. **(10 Marks)**

Module-2

3 a. Give an account of the various types of diabetes mellitus highlighting their pathophysiology and symptoms. **(10 Marks)**

b. Critically evaluate the measurement of glycated haemoglobin. Add a note on its significance. **(10 Marks)**

OR

4 a. Discuss the pathophysology and symptoms of multiple sclerosis. Add a note on how it is different from Sphingolipidoses. **(10 Marks)**

b. Write short notes on :
i) Apolipoproteins ii) Ketone bodies importance. **(10 Marks)**

Module-3

5 a. Discuss the biosynthesis of lysine with a schematic diagram. **(10 Marks)**

b. Explain the role of Transamination and Deamination in the Catabolism of essential amino acids. **(10 Marks)**

OR

6 a. Briefly outline the salient features of urea cycle, with the metabolic reactions involved. **(10 Marks)**

b. Discuss the metabolism and purine nucleotides. **(10 Marks)**

Module-4

7 a. Give an account on the molecular basis and Pathophysiology of Tyrosinemia. **(10 Marks)**

b. Discuss any two disorders of purine metabolism. **(10 Marks)**

OR

8 a. Explain in detail the hormones secreted by anterior and posterior pituitary glands. **(10 Marks)**

b. Briefly discuss the disturbances in thyroid functions. **(10 Marks)**

Module-5

9 a. Give an account on the tests conducted to investigate the Glomerular function. **(10 Marks)**

b. Explain the role of Creatine Kinase and lactate dehydrogenase in myocardial infarction. **(10 Marks)**

OR

10 a. Discuss the various liver function tests and their clinical importance. **(10 Marks)**

b. Give an account of the enzymes of pancreatic origin. **(10 Marks)**

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