

QP Code:U24A064

Reg. No :

Name :

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER B.Voc(CBCSS - VUG)DEGREE EXAMINATION, November 2024

B.Voc Applied Biotechnology

SDC1APB02 : Clinical Biochemistry

2024 Admission Onwards

(Credits: 4)

Time : 2.5 Hours

Maximum Marks : 80

Section A

Short answer type carries 2 Marks each (Ceiling :25 Marks)

1. Choose a disaccharide from the following and comment on it. [BTL1]
 - a) Sucrose
 - b) Glycogen
 - c) Glucose
 - d) Mannose
2. How pyruvate is converted to acetyl CoA? [BTL1]
3. Explain pI and pKa values of amino acid. [BTL2]
4. Define amphoteric property of amino acids. [BTL1]
5. Compare the activity of enzymes synthase and synthetases. [BTL2]
6. Explain peptide bond. [BTL2]
7. Identify the role of FAD in ETC. [BTL3]
8. Choose a protein with quaternary structure from the following and comment on it. [BTL3]
 - a) Insulin
 - b) Inulin
 - c) Keratin
 - d) Hemoglobin
9. Distinguish between simple lipids and compound lipids. [BTL4]
10. Construct a flowchart showing the major steps of fatty acid biosynthesis. [BTL3]
11. Analyze the significance of Km. [BTL4]
12. Analyze the impact of metabolic syndrome on cholesterol and triglyceride levels. [BTL4]
13. Given a patient with elevated liver enzymes, how would you approach the diagnosis of liver disease? [BTL3]
14. Describe Pancreatitis and what are its common causes? [BTL2]
15. Analyze the impact of lifestyle factors on the development of Pancreatic diseases. [BTL4]

Turn Over

Section B

Paragraph types carries 5 Marks each (Ceiling :35 Marks)

16. Summarize the steps and processes involved in Citric acid cycle. [BTL2]
17. Outline β - oxidation of fatty acids. [BTL2]
18. List out any 5 factors affecting enzyme activity. [BTL1]
19. Name the vitamin known as Ascorbic acid and mention its biological importance. [BTL1]
20. Demonstrate that chemiosmotic theory is essential for ATP synthesis. [BTL3]
21. Analyze the result of an oral glucose tolerance test to differentiate between type 1 and type 2 diabetes in a newly diagnosed patient. [BTL4]
22. Analyze the patterns of glucose, creatinine and albumin levels in a patient with suspected metabolic syndrome. [BTL4]
23. Analyze the significance of an elevated ESR in a patient with rheumatoid arthritis and how it correlates with disease activity and inflammation. [BTL4]

Section C

Essay-type carries 10 Marks : Answer any two questions.

24. Explain about dialysis and its types. [BTL2]
25. If a patient present with jaundice, fatigue, and elevated liver enzymes. Apply your knowledge to determine which type of hepatitis the patient have and explain on it. [BTL3]
26. Analyze the various physiological functions of fat-soluble vitamins. [BTL4]
27. Justify the statement that the drug disulfiram evokes alcohol avoidance by explaining the suitable mechanism behind it and also validate other similar methods. [BTL5]

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