TB243302C

Reg. No :.....

Name :.....

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, NOVEMBER 2024

2020, 2021, 2022 ADMISSIONS SUPPLEMENTARY

SEMESTER III - COMPLEMENTARY COURSE 1 (NUTRITION AND DIETETICS)

ND3C05B20 - Nutritional Biochemistry

Time : 3 Hours **Maximum Marks : 80**

Part A

I. Answer any Ten questions. Each question carries 2 marks **(10x2=20)**

1. Explain the production of oxaloacetate from pyruvate.
2. Write the metabolism of glycogen.
3. How is propionyl CoA converted to glucose?
4. Describe the regulation of cholesterol synthesis.
5. Explain degradation of cholesterol.
6. Describe the functions of bile acids.
7. Differentiate between essential and non-essential amino acids.
8. What are protamines and prolamines?
9. What is transdeamination? Give suitable examples.
10. Briefly discuss the glycogenolysis stage of starvation.
11. State the final stage of starvation.
12. What are the energy reserves of a normal 70 kg weighed man?

Part B

II. Answer any Six questions. Each question carries 5 marks **(6x5=30)**

13. Explain different types of carbohydrates according to the number of sugar units present.
14. Explain the conversion of various non-carbohydrates to glucose.
15. Write the classification of carbohydrates with suitable example.
16. Discuss the synthesis of bile acids in the body.
17. Illustrate fatty acid synthetic pathway.
18. Classify proteins based on composition and nutritional value.
19. How is ammonia removed from the body?
20. Why do long distance runners not compete with sprinters?
21. Differentiate between metabolism in well fed state and fasting state.

Part C

III. Answer any Two questions. Each question carries 15 marks **(2x15=30)**

22. Discuss various disaccharides. Elaborate on glycolysis.
23. Compare different types of adipose tissues. How is excess fat stored in the body?
24. What is amino acid pool? Explain various types of deamination of amino acids.
25. Discuss in detail organ specialization and metabolic integration in well-fed absorptive state.