

TB213630V

Reg. No :

Name :

B. Sc. DEGREE (C.B.C.S) EXAMINATION, NOVEMBER 2022
(2021 Admissions Regular, 2020 Admissions Supplementary/Improvement)
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. How is glycerol converted to glucose?
2. Discuss the conversion of galactose to glucose.
3. Write the metabolism of glycogen.
4. How is triglyceride synthesized in the body?
5. What is carnitine? Explain its function.
6. Describe β oxidation of PUFA.
7. What is oxidative deamination? Give suitable examples.
8. Describe glycoproteins and chromoproteins.
9. How is glutamine synthesized in brain?
10. What is the second stage in starvation?
11. Liver is the central metabolic cleaning house. Discuss in relation with the metabolic functions of liver.
12. What happens to human brain during starvation?

Part B

II. Answer any Six questions. Each question carries 5 marks

(6x5=30)

13. Explain the conversion of various non-carbohydrates to glucose.
14. How is lactic acid synthesized from glucose?
15. Explain the structure of starch. Discuss the metabolism of glycogen.
16. How is cholesterol degraded?
17. Explain the production of triglycerides.
18. Differentiate between oxidative and non-oxidative deamination.
19. Classify proteins based on composition and nutritional value.
20. Discuss how metabolic needs of the brain is met.
21. Discuss any one cause of fatty liver with reference to metabolic derangements in diabetes.

Part C

III. Answer any Two questions. Each question carries 15 marks

(2x15=30)

22. What is gluconeogenesis? Explain the pathway and substrates involved.
23. Elaborate β oxidation of odd chain fatty acids. Elaborate on Denovo synthesis of palmitic acid.
24. What is derived protein? Describe urea cycle.
25. Discuss in detail organ specialization and metabolic integration in well-fed absorptive state.