QP CODE: 21100514

21100514

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS)EXAMINATION, MARCH 2021

Third Semester

COMPLEMENTARY COURSE - BC3CMT03 - BIOCHEMISTRY- ENZYMOLOGY AND METABOLISM

(Common to B.Sc Zoology Model II Aquaculture, B.Sc Biological Techniques and Specimen Preparation Model III, B.Sc Biotechnology Model III, B.Sc Botany and Biotechnology Model III Double Main, B.Sc Botany Model I, B.Sc Botany Model II Environmental Monitoring And Management, B.Sc Botany Model II Food Microbiology, B.Sc Botany Model II Horticulture and Nursery Management, B.Sc Botany Model II Plant Biotechnology, B.Sc Microbiology Model III, B.Sc Zoology and Industrial Microbiology Model III Double Main, B.Sc Zoology Model I, B.Sc Zoology Model II Food Microbiology, B.Sc Zoology Model II Medical Microbiology)

2017 Admission Onwards

22238BC2

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What do you mean by an apoenzyme?
2. State Michaelis- Menten equation.
3. Define geometrical specificity exhibited by an enzyme.
4. What is the function of PDH?
5. What is the role of Complex I in ETC?
6. What is the role of glucose-6 phosphatase in glycogenolysis?
7. Who discovered Urea cycle?
8. Name two glucogenic amino acids.
9. Name two ketogenic amino acids.
10. Name the enzyme which catalyzes the formation of malonyl coA.
11. What is the role of carnitine in the oxidation of fatty acids?
12. Define beta oxidation of fatty acids.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Give details of the type of reaction by isomerases with suitable examples.
14. What is the significance of optimum temperature and optimum pH in an enzyme catalysed reaction?
15. What is Km? Comment on its significance.
16. Explain the significance of TCA cycle.
17. Differentiate between substrate level phosphorylation and oxidative phosphorylation.
18. Explain decarboxylation reaction of aminoacids with suitable examples.
19. Explain transamination reaction with suitable examples.
20. Explain activation of fattyacids.
21. How many cycles of beta oxidation are required for the complete oxidation of palmitic acid. Give the net reaction and ATP yield.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. a. What is lineweaver burk plot? Explain.
    b. Discuss the different types of enzyme specificity.
23. Explain the reaction of glycolytic sequence with the names of enzymes and intermediates.
24. Discuss the fate of amino group in aminoacid catabolism.
25. Give a note on the reaction sequences involved in cholesterol biosynthesis.

(2×10=20)