



21101982

QP CODE: 21101982

Reg No :

Name :

B.Sc DEGREE (CBCS) EXAMINATION, AUGUST 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

F8A3F383

Time: 3 Hours

Max. Marks : 60

Part A

Answer any **ten** questions.

Each question carries **1** mark.

1. What is the function of dehydrogenases?
2. Write down Lineweaver -Burk equation.
3. Write an example for optical specificity of an enzyme.
4. What is triose phosphate isomerase?
5. Name the enzyme which catalyse the conversion of pyruvate to acetylCoA in citric acid cycle.
6. Define Glycogenolysis.
7. Name the prosthetic group of decarboxylases.
8. Define deamination.
9. What is the role of carbamoyl phosphate synthetase in urea cycle?
10. What is the role of enoylCoA hydratase in beta oxidation of fatty acids?
11. What are ketone bodies?
12. Where does cholesterol biosynthesis take place in the cell?





(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Write a short note with suitable examples on: (a) Coenzymes (b) Geometrical specificity of enzymes
14. Explain Michaelis-Menten equation.
15. Give a note on K_m and its significance in the study of enzyme catalysed reactions.
16. Explain pyruvate dehydrogenase reaction.
17. Explain the action of glycogen synthase.
18. Explain the action of transaminases.
19. Explain the significance of glucogenic amino acids.
20. Explain how fatty acids are transported into the mitochondria?
21. Comment on the ATP yield from the oxidation of one molecule of palmitic acid.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. What are enzymes? Discuss the factors influencing enzyme action.
23. Discuss the aerobic and anaerobic oxidation of carbohydrate.
24. What is the fate of carbon skeleton from amino acid catabolism?
25. Explain the reaction steps in fatty acid biosynthesis.

(2×10=20)

