QP CODE: 19102074

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Reg No : .....

Name : .....

B.Sc. DEGREE (CBCS) EXAMINATION, OCTOBER 2019

Third Semester

COMPLEMENTARY COURSE - BC3CMT03 - BIOCHEMISTRY- ENZYMOLOGY AND METABOLISM

(Common to 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- Aquaculture, B.Sc Zoology Model II- Food Microbiology, B.Sc Zoology Model II- Medical Microbiology)

2017 Admission Onwards

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Maximum Marks: 60 Time: 3 Hours

Part A

*Answer any **ten** questions.*

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

1. What is Optimum pH?
2. Define Km.
3. Write down Lineweaver -Burk equation.
4. What is the condensation product of acetyl CoA and oxaloacetate in TCA cycle?
5. Define substrate level phosphorylation.
6. Which molecule is the final electron acceptor in electron transport chain?
7. What is the product of decarboxylation of aminoacids?
8. Define deamination.
9. Mention the number of ATP molecules involved in formation of Urea.
10. Mention the role of fattyacid synthase in metabolism.
11. How many molecules of acetyl CoA are produced from one molecule of palmitic acid?
12. What are ketone bodies?

(10 × 1 = 10)

Turn Over

Part B

Answer any six questions.

Each question carries 5 marks

13. Write a short note with suitable examples on: (a) Cofactors (b) Optical specificity of enzymes
14. Give a note on Michaelis Menten equation. Km Value and its significance
15. What are cofactors? Explain cofactor specificity.
16. Explain the anaerobic fates of pyruvate.
17. Briefly explain oxidative phosphorylation.
18. Comment on glucogenic amino acids.
19. Comment on ketogenic amino acids.
20. Explain the difference between fatty acid synthesis and beta oxidation.
21. Explain carnitine shuttle.

(6×5=3

Part C

Answer any two questions.

Each question carries 10 marks.

22. Give a detailed account on major classes of enzymes.
23. Describe the steps involved in glycogen metabolism and enzymes involved in it.
24. Describe the reactions involved in amino acid catabolism.
25. Explain the biosynthesis of cholesterol.

(2×10=