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Reg. No. 21020166.....

Name.....Tasmin.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2017

Third Semester

Complementary Course—Biochemistry—ENZYMOLOGY AND METABOLISM-1

(Common for all Programmes having Biochemistry as Complementary Subject)

(2013 Admission onwards)

Time : Three Hours

Maximum Marks : 60

Part A (Short Answer Questions)

Answer all questions.

Each question carries 1 mark.

1. Define C4 pathway.
2. What are cytochromes ?
3. Write on cofactor specificity of enzymes.
4. What is photophosphorylation ?
5. Write the functions of epinephrine.
6. Mention the role of pyruvate dehydrogenase.
7. What are hydrolases ?
8. What is a prosthetic group ?

(8 × 1 = 8)

Part B (Brief Answer Questions)

Answer any six questions.

Each question carries 2 marks.

9. Write a note on alcoholic fermentation.
10. Briefly explain LB plot.
11. Write a note on cofactors and coenzymes.
12. Mention the role of NADP and NADPH in metabolism.
13. Differentiate PSI and PSII.
14. Explain the role of hormones in glycogen metabolism.

Turn over

15. Write about geometrical specificity of enzyme action.
16. Explain allosteric activation of enzymes with examples.
17. Mention the significance of pentose phosphate pathway.
18. Briefly explain glyoxylate cycle and its significance.

(6 × 2 = 12)

Part C (Short Essays)

Answer any four questions.

Each question carries 4 marks.

19. Briefly explain Calvin cycle.
20. Give a note on Michael's Menton equation, K_m value and its significance.
21. Give an account on competitive and non-competitive inhibition of enzymes.
22. Write a note on breakdown of glycogen.
23. Briefly explain steps in glycolysis and enzymes involved in it.
24. Differentiate cyclic and non-cyclic photophosphorylation.

(4 × 4 = 16)

Part D (Long Essays)

Answer any two questions.

Each question carries 12 marks.

25. Describe electron transport chain and oxidative phosphorylation.
26. Illustrate steps involved in citric acid cycle and enzymes involved in it.
27. What is gluconeogenesis? Discuss the steps and enzymes involved in it.
28. Give an account of major classes of enzymes. Mention the factors affecting velocity of enzym catalyzed reactions.

(2 × 12 = 24)