

E 3985

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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2016

Third Semester

Complementary Course—Biochemistry—ENZYMOLGY AND METABOLISM—1

(Common for all Programmes having Biochemistry as Complementary Subject)

[2013 Admission onwards]

Time : Three Hours

Maximum : 60 Marks

Part A (Short Answer Questions)

Answer all questions.

Each question carries 1 mark.

1. What is CAM pathway ?
2. Mention the role of Rubisco.
3. Write down the role of insulin in glycogen metabolism.
4. What is holoenzyme ?
5. Write a note on acetyl CoA.
6. What is proton motive force ?
7. Comment on oxidoreductases.
8. What is the effect of temperature on enzyme action ?

(8 × 1 = 8)

Part B (Brief Answer Questions)

Answer any six questions.

Each question carries 2 marks.

9. Briefly explain Q cycle.
10. Discuss briefly alcoholic fermentation.
11. Write a note on activation of zymogen form of enzymes.
12. Comment on ATP synthase.
13. Describe the role of cyclic AMP.
14. Explain cofactors and coenzymes.
15. Briefly explain the optical specificity of enzymes.
16. List important high energy compounds.
17. Comment on Lineweaver Burk plot.
18. Write a note on pyruvate dehydrogenase complex.

(6 × 2 = 12)

Turn over

Part C (Short Essays)

*Answer any four questions.
Each question carries 4 marks.*

19. Illustrate citric acid cycle.
20. Briefly explain gluconeogenesis.
21. Write a note on Michael Menton equation and comment on its significance.
22. Describe the steps involved in glycolytic pathway.
23. Discuss allosteric inhibition and activation of enzymes with examples.
24. Describe oxidative phosphorylation and ATP synthesis.

(4 × 4 = 16)

Part D (Long Essays)

*Answer any two questions.
Each question carries 12 marks.*

25. Briefly describe light and dark reactions of photosynthesis
26. Explain the steps involved in glycogen metabolism and enzymes involved in it.
27. Discuss classification of enzymes and mention the specificities exhibited by enzymes
28. Explain pentose phosphate pathway in detail and mention its significance.

(2 × 12 = 24)