

18U615

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Name:

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2021

(CUCBCSS-UG)

(Regular/Supplementary/Improvement)

CC15U ZO6 B10 - BIOCHEMISTRY

(Zoology - Core Course)

(2015 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

A. Answer *all* questions. Each question carries 1 mark.

1. Electrophoretic method employed for the analysis of DNA molecules.
2. In Barfoed's test blue coloured cupric sulphate is reduced to orange coloured -----
3. What are amphipathic compounds?
4. Name a monosaccharide classified as ketose sugar.
5. Name two sulphur containing aminoacids.
6. Which are the two major types of secondary protein structures?
7. What are lyases?
8. What are coenzymes?
9. In a DNA strand the adjacent nucleotides are linked together by ----- bonds.
10. What is an aminoacyl tRNA?

(10 × 1 = 10 Marks)

B. Answer any *ten* questions in two or three sentences. Each question carries 2 marks.

11. What is epimerism? Write down one example?
12. Define Chemiosmotic coupling hypothesis.
13. What is oxidative decarboxylation? Give one example.
14. List out any four biological functions of ATP.
15. Differentiate between inter molecular and intra molecular hydrogen bonds.
16. Write down the applications of spectrophotometer.
17. What are the structural components of FAD and NAD?
18. State the cardinal points of induced fit hypothesis.
19. What are isoenzymes? Give one example.
20. Point out the differences between starch and glycogen.
21. What do you mean by liquid-liquid partition chromatography?
22. What is glycogenolysis?

(10 × 2 = 20 Marks)

C. Answer any *five* questions. Each question carries 6 marks.

23. Explain the shuttle systems involved in mitochondrial oxidation of NADH.

24. Describe the general structure of purine and pyrimidine with example.

25. Comment on different types of enzyme inhibitions.

26. Briefly explain the double helical structure of DNA.

27. Discuss the various steps involved in glycolysis.

28. Briefly explain the steps involved in beta oxidation.

29. Explain the process of oxidative phosphorylation in the respiratory chain.

30. Giving proper illustrations, describe the structure and function of tRNA.

(5 × 6 = 30 Marks)

D. Write essays on any *two* of the following: Each question carries 10 marks.

31. Write an essay on different levels of structural organization of protein.

32. Describe the steps involved in glycogenesis and glycogenolysis.

33. Explain the catabolism of amino acids.

34. Write an essay on various types of chromatographic and electrophoretic techniques and their applications.

(2 × 10 = 20 Marks)
