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Name:

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2020

(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. Name the bond formed by sharing of electrons between two atomic nuclei.
2. Sucrose is formed by condensation polymerization of ----- and -----
3. ----- is the principle behind colorimetry
4. Expand FAD
5. The non-protein part of an enzyme is known as -----
6. Write down an example for a protein having quaternary structure
7. Which is the enzyme that breaks down $\alpha - (1-6)$ bonds in glycogen?
8. Name the organelle that carries out aerobic phase of cellular oxidation
9. Which is the RNA that transfers activated aminoacids from cytoplasm to ribosome?
10. ----- is known as universal currency of free energy of the cell

(10 x 1 = 10 Marks)

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

11. Define peptide bond with appropriate diagram
12. Explain the functional organization of an enzyme
13. What is Pasteur Effect
14. Write down any two qualitative tests for the analysis of Protein
15. What is trans deamination?
16. What is hydrogen bond? Mention its biological significance
17. Describe the beta helical structure of protein
18. Explain non-competitive inhibition.
19. What is ribozyme? Which are the two categories of ribozymes?
20. Differentiate between nucleoside and nucleotide.
21. Explain the structure of anticodon arm of tRNA.
22. What is gluconeogenesis?

(10 x 2 = 20 Marks)

C. Answer any *five* questions in not more than a paragraph each. Each carries question 6 marks:

23. What is spectrophotometer? Explain its components and applications.

24. Comment on different types of bonds seen in biological molecules

25. Briefly explain different types of enzyme inhibitions.

26. What is glycolysis? Explain the steps involved in glycolysis.

27. Write short notes on primary and secondary structure of proteins.

28. Explain the structure of B-DNA

29. List out the biological functions of proteins

30. Classify amino acids based on the nature of side chain

(5 x 6 = 30 Marks)

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

31. What is electrophoresis? Describe different types of electrophoretic separation techniques and their applications.

32. Write an essay on chemistry and structure of ATP, cAMP, NAD⁺ and FAD

33. Classify lipids and add notes on their function.

34. Describe the organization and functioning of the components of the respiratory chain

(2 x 10 = 20 Marks)
