

D 40077

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2018

(CUCBCSS—UG)

Zoology

ZOL 6B 10—BIOCHEMISTRY

Time : Three Hours

Maximum : 80 Marks

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

- 1 Name any two properties of water that makes it suitable for living organisms.
- 2 The state of energetic disorder or randomness is known as _____.
- 3 Why is glycogen called a 'homopolymer' ?
- 4 What is an active site of an enzyme ?
- 5 The bond formed between two amino acids resulting in the expulsion of a molecule of water is called _____.
- 6 What is the role of mRNA ?
- 7 The hormones that regulate the levels of glucose in man.
- 8 What is a zwitter ion ?
- 9 What is a ribozyme ?
- 10 What is deamination ? Where does it occur in mammals ?

(10 × 1 = 10 marks)

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

11. Define pH and highlight its role in biological systems.
12. What are the applications of a colorimeter ?
13. What is iso-electric point? What is its application ?
14. Distinguish between simple and conjugated proteins.
15. What are steroids? Name the most abundant steroid in animals.
16. Sketch and label the structure of tRNA.
17. Write a short note on NAD.
18. Write a short note on prostaglandins and their functions.

Turn over

19. Distinguish between a ligase and a lyase.
20. Draw the chemical structure of ATP.
21. What role does transamination play in metabolism?
22. What is an oxido-reduction reaction? Give one example.

(10 × 2 = 20 marks)

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

23. Give brief descriptions of the different types of bond interactions seen in biochemicals?
24. Write down the principle involved in Fehling's test.
25. Write a short note on the principle and working of a colorimeter.
26. What is paper chromatography? What are its applications?
27. Name the enzymes and the reactions they catalyse in glycolytic pathway.
28. Distinguish between substrate level phosphorylation and oxidative phosphorylation.
29. Write a short note on beta-oxidation of fatty acids.
30. Explain the role of redox reactions in the ETC.

(5 × 6 = 30 marks)

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

31. Describe the different types of carbohydrates and their functions.
32. Compare and contrast any three types of chromatography and their applications.
33. Classify enzymes according to their functions.
34. Describe glycolysis.

(2 × 10 = 20 marks)