

## SECOND SEMESTER B.Sc. DEGREE EXAMINATION, APRIL/MAY 2013

(CCSS)

Biochemistry

BC2 C05—ELEMENTARY BIOCHEMISTRY-2

Time : Three Hours

Maximum : 30 Weightage

## Section A

Answer **all** questions.Each question carries a *weightage* of 1A.

1. An amino acid containing sulphur is :  
(a) Arginine. (b) Lysine.  
(c) Methionine. (d) Proline.
2. Nucleosides are composed of \_\_\_\_\_ and \_\_\_\_\_
3. \_\_\_\_\_ is an essential amino acid.
4. \_\_\_\_\_ is a saturated fatty acid.
5. An example of ketohexose is \_\_\_\_\_
6. An example of heteropolysaccharide is :  
(a) Amylose. (b) Hemicelluloses.  
(c) Cellulose. (d) Amylopectin.
7. The functional groups present in monosaccharides are \_\_\_\_\_ and \_\_\_\_\_ groups.
8. \_\_\_\_\_ is the type glycosidic linkage present in cellulose.  
(a) a (1, 4). (b) a (1, 2).  
(c) (1, 4). (d) <sub>R</sub> (1, 2).
9. Aminocids possess positive as well as negative charges in solution and hence are said to be \_\_\_\_\_ nature.
10. The nitrogenous base present in lecithin is \_\_\_\_\_
11. A sugar which rotates the plane polarized light anticlockwise is known as \_\_\_\_\_
12. Which one of the following attachments is not correct :—  
(a) A = T. (b) T = A.  
(c) G ≡ C. (d) C = G.

(12 x = 3 weightage)

Turn over

**Section B**

Answer **all** questions.

Each question carries a *weightage* of 1.0.

13. Define the primary structure of protein.
14. What is **Proteolysis** ?
15. What is Optical activity ?
16. Define the tertiary structure of proteins.
17. Distinguish between nucleoside and nucleotide.
18. What are Derived lipids ? Give *two* examples.
19. What are basic amino acids ? Give *two* examples.
20. Write short note on **phosphatidic** acid.
21. Draw the structure of ATP.

(9 x 1 = 9 weightage)

**Section C**

Answer any **five** questions.

Each question carries a *weightage* of 2.0.

22. Explain **Mutarotation**.
23. Explain the classification of fatty acids.
24. Explain the structure of **tRNA**.
25. What are essential amino acids ? Explain their significance.
26. Draw and explain the structure of starch.
27. Explain the colour reactions of proteins.
28. Explain the structure and functions of cholesterol.

(5 x 2 = 10 weightage)

**Section D**

Answer any **two** questions.

Each question carries a *weightage* of 4.0.

29. What are Carbohydrates ? Explain the classification of carbohydrates.
30. Explain the Watson—Crick model of DNA.
31. What is Isomerism ? What are the different types of Isomerism ? Explain with suitable examples.

(2 x 4 = 8 weightage)