

E 8338

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Name... Gokul .....

**B.Sc. DEGREE (CBCS) EXAMINATION, JANUARY/FEBRUARY 2018**

**First Semester**

Complementary Course—Biochemistry

**ELEMENTARY BIOCHEMISTRY**

(Common for all programmes having Biochemistry as Complementary Subject)

[2017 Admissions]

Time : Three Hours

Maximum Marks : 60

**Section A**

*Answer any ten questions.*

*Each carries 1 mark.*

1. Mention the role of RUBISCO. ✓
2. What is Uniport. ✓
3. What are the major functions of Alkaloids ?
4. What is two dimensional paper chromatography ?
5. What is a buffer solution ? ✓
6. State the term conic product of water. ✓
7. What is facilitated diffusion ? ✓
8. Define a covalent bond. ✓
9. What are the main classes of secondary metabolites ?
10. What is blotting ? ✓
11. Comment on the term light harvesting complex. ✓
12. What is the importance of proteomics ? ✓

(10 × 1 = 10)

**Section B**

*Answer any six questions.*

*Each carries 5 marks.*

13. Comment on techniques (a) Spectrophotometry ; (b) Colorimetry.
14. Derive Henderson-Hasselbalch equation.

**Turn over**

15. Briefly explain the types of proteins present in Lipid Bilayer.
16. Explain  $C_4$  pathway.
17. Explain any one phenomena involving Donnan equilibrium.
18. What is Beer Lambert's law ? Comment on its significance.
19. Explain the structure of Water.
20. What are terpenoids ? Give two examples.
21. Explain briefly the principle high performance thin layer chromatography.

(6 × 5 = 30)

### Section C

*Answer any two questions.*

*Each carries 10 marks.*

22. Explain interactions in aqueous systems.
23. Describe primary and secondary plant metabolites.
24. Explain the mechanism of Nitrogen fixation.
25. Write an essay on : (a) Paper Chromatography ; (b) Gel filtration.

(2 × 10 = 20)