

TB146160A

Reg. No.....

Name.....

**B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017**

**SEMESTER VI - CHEMISTRY**

**CHE6CNB - CHEMISTRY OF NATURAL PRODUCTS AND BIOMOLECULES**

**Time: Three Hours**

**Maximum Marks: 60**

**PART A**

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

1. Name the terpene present in lemon grass oil.
2. Name the monomer present in cellulose.
3. Draw the structure of thiophene.
4. Give an example for a basic amino acid.
5. Draw the structure of adenine.
6. What is a coenzyme?
7. What is Diels hydrocarbon?
8. Define supramolecular chemistry.

**(8x1=8)**

**PART B**

**II. Answer any six questions. Each question carries 2 marks.**

9. What do you mean by iodine value?
10. What is mutarotation?
11. Give one method for the preparation of furan.
12. What are green fluorescent proteins?
13. What do you mean by inhibition of enzyme?
14. What are the factors affecting the rate of enzyme action?
15. Draw the structure of vitamin D. Give its biological functions.
16. What are HDL and LDL cholesterols?
17. Explain stacking in supramolecular chemistry.
18. Explain the concept of molecular recognition.

**(6x2=12)**

**PART C**

**III. Answer any four questions. Each question carries 4 marks.**

19. Elucidate the structure of coniine.
20. Explain briefly vulcanisation.
21. Compare the basicity of pyridine, pyrrole and piperidine. Give explanation for your Suggestion.
22. Explain the Skraup synthesis for the preparation of quinolone.
23. How will you convert D(-)fructose to D(-) glucose?
24. Explain the structure of starch.

**(4x4=16)**

## PART D

### IV. Answer any two questions. Each question carries 12 marks.

25. Elucidate the structure of piperine.
26. Give the open chain structure and ring structure of glucose. Explain the important reactions of glucose.
27. Give an account of the primary, secondary and tertiary structure of proteins. Explain the solution phase peptide synthesis.
28. a) Explain the structure, synthesis and important reactions of indole  
b) Explain the important reactions of pyridine.

(2x12=24)