K19U 0086

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS – Reg./Supple./Improv.) Examination, April 2019
(2014 Admission Onwards)
CORE COURSE IN CHEMISTRY
6B14 CHE : Organic Chemistry – III

Time : 3 Hours Total Marks: 40

***Instruction** : Answer the questions in **English** only.*

SECTION – A

Objective type. **Each** carries **1** mark. Answer **all** questions. **(4×1=4)**

1. What is the monomer of natural rubber ?
2. Name the amino acid which contains indole moiety.
3. Give example for a sulpha drug.
4. Represent the structure of vanillin.

SECTION – B

Short answer type. **Each** carries **2** marks. Answer **7** questions out of **10**.

5. Illustrate the 2 + 2 cyclo addition using FMO.
6. How is urethane synthesized ?
7. Outline the Strecker synthesis of amino acids.
8. How is Sorenson formol titration carried out ?
9. Mention a test by which acetaldehyde differentiated from benzaldehyde ?
10. How does a secondary nitroalkane react with formaldehyde and NH_4Cl ?
11. Mention the advantages of ultra sound assisted esterification and Saponification reactions compared to usual conditions.

P.T.O.

12. How does acetaldehyde react with excess of formaldehyde in the presence of a base ?

13. Give one method for the preparation of 9, 10-anthraquinone.

14. How will you differentiate between benzyl amine and toluidine by a chemical test ? **(7×2=14)**

SECTION – C

Short essay/problem type. **Each** carries **3** marks. Answer **4** questions out of **6**.

15. Elaborate on narcotic analgesics.

16. Give an outline of protein synthesis.

17. Elucidate the structure of coniine.

18. Outline the mechanism of reformatsky reaction.

19. Elaborate on the discovery of antibiotics.

20. Explain Wolf rearrangement with reference to Arndt-Eistert synthesis. **(4×3=12)**

SECTION – D

Long essay type. **Each** carries **5** marks. Answer **2** questions out of **4**.

21. Give a brief note on the preparation and synthetic applications of : **(2½ + 2½)**

    a) Urea and b) Thiourea.

22. Elaborate on the reactions of : **(2½ + 2½)**

    a) Diazonium salts and b) Diazomethane.

23. What are alkaloids ? Depict the structure of the following alkaloids and mention their properties : **(1+2+2)**

    a) Nicotine b) Quinine.

24. Explain the following reactions : **(1½ + 1½ +2)**

    a) Riley oxidation b) Pinacol coupling c) MPV reduction.

(2×5=10)