K15U 0243

Reg. No. : .....

Name : .....

III Semester B.Sc. Degree (CCSS – 2014 Admn. – Regular) Examination, November 2015
Core Course in Chemistry
3B04 CHE : ORGANIC CHEMISTRY – I

Time : 3 Hours Max. Marks : 40

SECTION – A

(Answer **all** questions. **Each** question carries **one** mark.)

1. How is picric acid prepared ?
2. Give the structure 3,3-dimethylbut-1-yne and 4-hydroxy-4-methyl-2-pentanone.
3. What is wurtz reaction ?
4. What are nitrenes ? **(4×1=4)**

SECTION – B

(Answer **any seven** questions. **Each** question carries **2** marks.)

5. State Saytzeff rule and predict the product when 2-bromobutane treated with KOH and ethanol.
6. Why chloroacetic acid is more stronger than acetic acid ?
7. How is glycerol synthesised from propylene ?
8. Explain Kolbes electrolytic process.
9. How do you account for the relative stability of primary secondary and tertiary carbonium ion ?
10. What is Freund's reaction ?
11. What are homolysis and heterolysis ?

P.T.O.

12. How can you prepare chloroform from acetone ?
13. What are the products formed when 1, 1-dicloro ethane is treated with aqueous KOH and alcoholic KOH ?
14. Explain the hybridization of carbon in ethene. **(7×2=14)**

SECTION – C

(Answer **any 4** questions. **Each** question carries **3** marks.)

15. How are dienes classified ?
16. What are carbines ? How are they generated ?
17. Explain the mechanism of dehydration of alcohols.
18. Write a note on additions reactions of alkenes.
19. Explain Victormeyers test.
20. Comment on the acidity of phenol. **(4×3=12)**

SECTION – D

(Answer **any 2** questions. **Each** question carries **5** marks.)

21. Discuss the mechanisms of a) Claisen rearrangement b) Pinacole-pinacolone rearrangement. **5**
22. Discuss the mechanisms and stereochemistry of SN^1 and SN^2 reactions of alkylhalides. **5**
23. Explain the following :
    a) Inductive effect. **2**
    b) Hyper conjugation. **2**
    c) Resonance effect. **1**
24. a) What are poly nuclear hydrocarbons ? **1**
    b) Outline the synthesis of naphthalene and anthracene. **4**

(2×5=10)