TB142070C

Reg. No:…………………..

Name:……………………..

B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017
(Supplementary – 2014 Admission)
SEMESTER II - COMPLEMENTARY COURSE (CHEMISTRY)
CHE2BOC- BASIC ORGANIC CHEMISTRY
(For Botany, Zoology, Family and Community Science)

**Time: Three Hours**　　　　　　　　　　　　　　　　　**Maximum Marks: 60**

PART A

I. Answer all questions. Each question carries 1 mark

1. Draw the Sawhorse projection of ethane.
2. Optical isomers of a compound which are not mirror images are called -----------.
3. The light whose rays vibrate only in one direction is called --------.
4. Give an example for a natural polymer.
5. The hydrolysis of methyl bromide with aqueous alkali to form methyl alcohol is an example for ------------type of nucleophilic substitution reactions.
6. Which type of bond fission results in the formation of free radicals?
7. A reaction in which an atom or group in a molecule is replaced by another is called -----------reaction.
8. The hybridisation of carbon atom in acetylene molecule is--------.

$(8\times1=8)$

PART B

II. Answer six questions. Each question carries 2 marks

9. Define conformational isomerism.
10. Assign E and Z configuration to the following molecules.
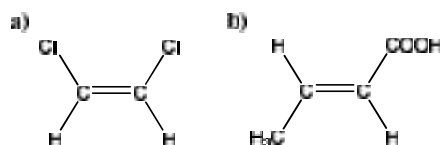
11. What are the conditions for the compound to be optically active?
12. What are diastereo isomers?
13. Explain any one method for the resolution of recemic mixtures.
14. Explain mesomeric effect.
15. Give one example for reaction involving E1 mechanism.
16. What is meant by rearrangement reactions? Give example.
17. How is neoprene synthesised?
18. Name and draw the structure of monomer of natural rubber.

$(6\times2=12)$

PART C

III. Answer four questions. Each question carries 4 marks

19. Discuss the preparation and applications of the synthetic rubber Buna-N.
20. Briefly explain E1 and E2 reactions.
21. State Markownikoff rule and Anti Markownikoff rule.
22. How many stereo isomers are possible for Tartaric acid? Draw their structures.
23. Explain the geometrical isomerism in aldoximes and ketoximes.
24. Distinguish between conformation and configuration.

(4✕4=16)

PART D

IV. Answer two questions. Each question carries 12 marks

25. Discuss the formation, structure and stability of carbocations, carbanions and free radicals.
26. Give the mechanism of halogenation and Friedel Craft's reaction of benzene.
27. Draw and explain the conformational isomers of n-butane and cyclo hexane with respect to their stability.
28. Discuss the preparation, structure and application of the following industrially important polymers.
    a) PVC b) Melamine – Formaldehyde resin c) Nylon – 6 d) Bakelite

(2✕12=24)