

TB142070A

Reg. No:

Name:

B.Sc. DEGREE (CBCSS) EXAMINATION, APRIL 2015
SECOND SEMESTER – COMPLIMENTARY COURSE (CHEMISTRY)
(COMMON for B.Sc. BOTANY, ZOOLOGY, FAMILY AND COMMUNITY SCIENCE)
CHE2BOC – BASIC ORGANIC CHEMISTRY

Time: 3 Hours

Maximum: 60 Marks

Part A

(Answer all questions. Each question carries one mark)

1. One example of a neutral electrophile is -----
2. Hybridisation state of carbon present in acetylene is -----
3. Which is the most stable conformation of cyclohexane?
4. What is PET?
5. Stereoisomers which are not mirror images are called -----
6. Number of asymmetric carbon atoms present in $\text{CH}_3\text{CHOHCHOHCHOHCH}_3$ is -----
7. The dehydrohalogenation of tertiary butyl bromide, with alcoholic KOH to give isobutene is an example for ----- reaction.
8. Among formic and acetic acids the more acidic is -----

(8x1= 8 marks)

Part B

(Answer six questions. Each question carries two marks)

9. Differentiate conformation and configuration,
10. Represent E and Z isomers of 2-chloro but-2-ene.
11. Explain mesomeric effect.
12. What is Markonikoff's rule? Illustrate with an example.
13. How is Nylon 6,6 prepared? Give equation.
14. Define the terms enantiomers and diastereomers with suitable examples.
15. Distinguish between addition and condensation polymerization.
16. Explain why aniline is less basic than ammonia.
17. What is meant by a) resolution b) racemisation.
18. What is chirality? Explain with an example.

(6x2=12 marks)

Part C

(Answer *four* questions. Each question carries four marks)

19. Discuss on geometrical isomerism in aldoximes and ketoximes.
20. Explain stereoisomerism in tartaric acid. Draw the structures of the isomers.
21. Write a note on hyperconjugative effect.
22. Briefly explain the four major types of organic reactions with suitable examples.
23. Give one method of preparation of a) Neoprene b) Buna N rubber (write equations)
24. Draw the various conformations of n-butane and discuss their stability with the help of potential energy level diagram.

(4x4=16 marks)

Part D

(Answer *two* questions. Each question carries 12 marks)

25. Discuss briefly on geometrical and optical isomerism.
26. (a) Explain S_N1 and S_N2 mechanism with suitable examples.
(b) Write notes on (i) peroxide effect (ii) Saytzeff's rule
27. Describe the synthesis and applications of:
(a) phenol - formaldehyde resin (b) melamine – formaldehyde resin
28. Discuss the structure and stability of various reaction intermediates.

(2x12=24 marks)