

45



K23U 1108

Reg. No. :

Name :

**IV Semester B.Sc. Degree (CBCSS – OBE – Regular/ Supplementary/
Improvement) Examination, April 2023
(2019 Admission Onwards)
CORE COURSE IN CHEMISTRY/ POLYMER CHEMISTRY
4 B06 CHE/PCH : Organic Chemistry – II**

Time : 3 Hours

Max. Marks : 40

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

SECTION – A

Very short answer type – **Each** carries 1 mark – Answer **all 4** questions.

1. Name the product obtained when pent-1-ene adds HBr in the presence of benzoyl peroxide.
2. Lindlar's catalyst is _____
3. Benzaldehyde and benzophenone can be distinguished by _____ test.
4. Borsche's reagent is _____ (4×1=4)

SECTION – B

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

5. In SN₁ reaction racemisation occurs while in SN₂ reaction, it is Walden inversion. Why?
6. What is Saytzeff rule? Explain with suitable example.
7. How will you synthesize propene from propyl alcohol?

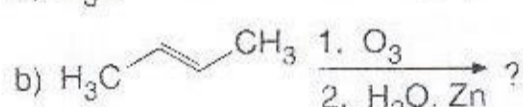
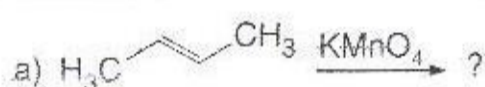
P.T.O.

K23U 1108

-2-



8. Write the product in the following reaction



9. What is Hoffman elimination reaction? What is its significance?
10. How will you synthesize anthracene from benzyl chloride?
11. Give any one method for the synthesis of carbon tetrachloride.
12. What is Lucas method?
13. Explain the method for the isolation of glycerol from fat and oils.
14. Why phenol is more acidic than alcohols? (7×2=14)

SECTION – C

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

15. Write short note on :
 - a) Pinacol-Pinacolone rearrangement
 - b) Claisen rearrangement.
16. Suggest any two method for the reduction of butanone to butane. Identify the name reactions for the conversion.
17. What is Borsch's reagent? How will you distinguish benzaldehyde and phenol using Borsch's reagent test?
18. How will you convert phenol to
 - a) Salicylaldehyde,
 - b) Salicylic acid?



-3-

K23U 1108

19. What are the reaction conditions to get propene and propyl alcohols from propyl bromide? Identify the reactions as SN₂ and E₂. Rationalize any one with suitable mechanism.
20. Explain Haworth synthesis of naphthalene. (4×3=12)

SECTION – D

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

21. a) Explain Chuugaev reaction with suitable example. 2
 b) What is Kharasch effect? How does it differ from Markownikoff addition? 3
22. a) What is ozonolysis? 2
 b) Identify the alkene which produces acetone in ozonolysis. Write the complete reaction scheme. 3
23. a) What is Tollen's reagent? What is the significance of Tollen's reagent in functional group detection of organic compounds? Illustrate with suitable examples (Scheme required). 3
 b) Explain another test for the detection of an aldehyde functional group in organic molecules. 2
24. How will you synthesize 1°, 2°, 3° alcohols from carbonyl compound? Explain with suitable examples. (2×5=10)