



Date: 26-04-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

Answer ALL the questions.

(10 x 2 = 20 marks)

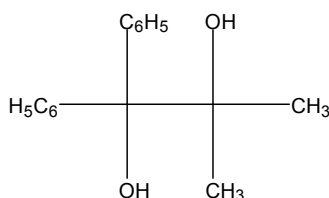
1. Tertiary amines do not form diazonium salts. Why?
2. Why is aniline less basic than methyl amine?
3. Define optical isomerism.
4. Draw the Fischer forms of all the stereoisomers of 2-bromobutane.
5. How is acetoacetic ester prepared from ethyl acetate?
6. What is meant by anionotropic rearrangement?
7. Draw the structure of geraniol and camphor.
8. What happens when pyrrole reacts with nitration mixture? Write the reaction.
9. State special isoprene rule.
10. What are alkaloids? Give an example.

PART – B

Answer any EIGHT questions

(8 x 5 = 40 marks)

11. How are nitro compounds classified? Explain with examples.
12. Discuss the reduction of nitrobenzene in acidic, basic and alkaline media.
13. Explain Hinsberg's method of separation of amines.
14. What is a racemic mixture? Elaborate a method to prepare it.
15. Discuss the optical activity exhibited by biphenyls.
16. Convert ethyl acetoacetate to a. 2-butanone b. succinic acid. (2+3)
17. How is diazomethane prepared? Convert acetic acid to propionic acid using diazomethane.
18. Explain Cope and Oxy-Cope rearrangement with mechanism..
19. What happens when the following compound is treated with dil.H₂SO₄? Explain with mechanism. .

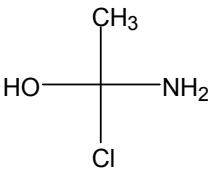
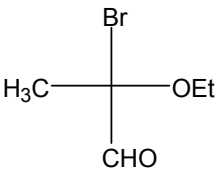
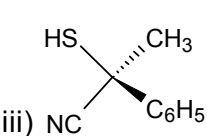
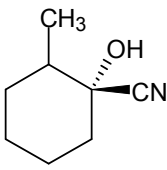
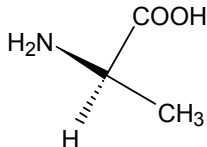


20. Explain Herzig -Meyer method and Ziesel's method used in structural determination of alkaloids..
21. Discuss the electrophilic substitution reactions taking place in furan.
22. Draw the structures of citral and alpha pinene and write a brief note on their physical properties.

PART – C

Answer any FOUR questions

(4 x 10 = 40 marks)

23. a. Explain the mechanism of nitration of benzene
b. How are the following compounds prepared from benzene diazonium chloride? Write the reactions
i) benzene ii) chlorobenzene iii) iodobenzene iv) phenol v) p-hydroxy azobenzene. (5+5)
24. a. What is meant by resolution? Explain any one method of resolving a racemic mixture. (4)
b. Assign R/S notation:
- i)  ii) 
- iii)  iv) 
- v)  (2+2+2)
25. a. Discuss any two synthetic uses of diethyl malonate.
b. Provide any three reactions to prove the presence of enolic form in acetoacetic ester. (5+5)
26. Predict the product and propose the mechanism for the following reactions.
a. benzophenone oxime is treated with dil.H₂SO₄.
b. benzamide is treated with Br₂ and aq.KOH. (5+5)
27. a. Explain any one method each to prepare quinoline and isoquinoline. (3+3)
b. What happens when
i) pyrrole is treated BF₃ in acetic anhydride
ii) quinoline is oxidized with KMnO₄
iii) isoquinoline is reduced with H₂/Ni. (1+2+1)
28. a. Illustrate i. Gomberg reaction ii. Gattermann reaction. (2x2.5)
b. Write a short note on the isolation and properties of terpenes. (5)

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