



Date: 07-11-2017

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART-A

Answer ALL the questions.

(10 x 2 =20)

1. Define chirality.
2. What is atropisomerism?
3. Give an example of S_NAr mechanism.
4. Predict the product of 2-butene reaction with HBr.
5. How will you prepare t-butyl alcohol from acetone?
6. Write the reaction of phenol with diazomethane.
7. Draw the structure of 18-crown-6 ether.
8. How will you prepare diethyl ether from ethanol?
9. Write the Gattermann reaction.
10. What is diazo coupling reaction?

PART-B

Answer EIGHT questions.

(8 x 5 =40)

11. Write the Sawhorse, Fischer and Newmann projection formula of *d*- and *meso*- tartaric acid.
12. Discuss any two methods of resolution of racemic mixture.
13. Explain Cahn-Ingold-Prelog rules.
14. Explain the dissymmetry exhibited by biphenyls.
15. Describe the preparation of aliphatic halides by free radical mechanism.
16. Explain the effect of substrate and solvent on S_N1 reaction.
17. Discuss the mechanism of hydroxylation of alkenes.
18. How will you prepare alcohol by hydroboration-oxidation and by epoxidation?
19. Explain the ring opening reaction by acid and base catalysis.
20. Discuss the reduction of nitrobenzene in neutral and alkaline media.
21. Discuss the effect of substituents on basicity of aromatic amines.
22. Prepare the following compounds from benzene diazonium chloride

(i)Benzene (ii)Fluoro benzene (iii) phenol

PART-C

Answer any **FOUR** questions.

(4 x 10 =40)

23. (a) Describe asymmetric synthesis. **(5)**
(b) Explain erythro and threo representation with suitable examples. **(5)**
24. (a) Discuss the stereochemistry and reactivity of S_N2 reaction. **(5)**
(b) Explain the mechanism of E1 reaction with suitable evidence. **(5)**
25. Write a short note on **(3+3+4)**
(a) Friedel-Craft's acylation (b) Kolbe's reaction
(c) Riemer-Tiemen reaction
26. (a) Discuss with mechanism the Williamson's synthesis. **(5)**
(b) Discuss the cleavage and oxidative reactions of ether. **(5)**
27. (a) Write the synthesis of *p*-dinitrobenzene. **(4)**
(b) Explain the preparation of secondary and tertiary amines by alkylation mechanism. **(3+3)**
28. (a) Write the preparation of sulphaquanidine. **(4)**
(b) Write short note on Sandmeyer reaction and Gomberg reaction. **(3+3)**
