

9. Carbonation of Grignard reagent leads to the synthesis of
- Alkyl halide
 - Carboxylic acid
 - Aldehyde
 - Ketone
10. Effect of the para-CH₃ group on the acidity of benzoic acid
- Increase
 - Decrease
 - No effect
 - Strongly increase
11. Carboxylic acid is more acidic than alcohol and phenol due to
- Intermolecular hydrogen bonding
 - Formation of dimmers
 - None
 - Resonance stabilization of their conjugated base
12. In an organic reaction as a product if you get toluene (an alkylbenzene) from benzene then which of the following reaction may happened?
- Nitration of benzene
 - Sulphonation of benzene
 - Friedel crafts alkylation
 - Friedel crafts acylation
13. Naphthalene on oxidation with CrO₃/CH₃OOH gives
- 1,2-Naphthoquinone
 - 1,3-naphthoquinone
 - 1,4-naphthoquinone
 - No reaction
14. When an atom loses or donates its electron due to resonance which sign arise on that atom in this condition?
- Positive
 - Negative
 - Both
 - Delta negative
15. Which one of the following is act as a nucleophile
- K⁺
 - CN⁻
 - SO₃
 - None of the above
16. Which one of the following is act as an electrophile
- N₂⁺
 - H₂O
 - Cl⁻
 - All of these
17. Which one is more electronegative
- F
 - O
 - N
 - C
18. Phenols are derivative of-
- Benzene
 - Alkanes
 - Alkynes
 - Alkenese jogir
19. Electron withdrawing substituents?
- Stabilise the phenoxide ion and increase the acidity of phenol.
 - Stabilise the phenoxide ion and decrease the acidity of phenol
 - Stabilise the phenoxide ion and neutralise the acidity of phenol
 - None of above.
20. Phenol is less acidic than
- Ethanol
 - p-methoxyphenol
 - p-nitrophenol
 - Both a and b

(PART-B: Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

1. Explain the following key terms with example (reactions) a) Hydrolysis of fat. b) Hydrogenation of fat. 5
2. Write the synthetic uses of Aryl-di-azonium salt. 5
3. Write the reactions with mechanisms about Friedel crafts alkylation? What is the limitations of it? 5
4. Explain briefly - Resonance of benzene 5
5. Write the structure and uses of phenol, cresols and naphthols. Mention any two qualitative test for phenol. 5
6. Explain bayer strain theory with limitations. 5
7. Explain a) Acid value b) Saponification value c) Ester value 5
8. Write notes on polynuclear hydrocarbon with example and classification of polynuclear hydrocarbon? 5
9. What is Coulson and Moffitt's modification in cycloalkane and Sachse Mohr's theory? 5

PART-C : Long type questions

[Answer any two (2) questions]

1. Give brief notes on structure of amine. Explain the Methods of preparation of amine. Write the basicity of amine with their effect on substituents. 10

2. Write the reactions with mechanisms 10
 - a. Nitration of benzene
 - b. Sulphonation of benzene
 - c. Halogenation of benzene

3. Write the structure and three uses 10
 - a. Saccharine
 - b. DDT
 - c. BHC
 - d. Chloramine