22102717

QP CODE: 22102717

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR EXAMINATIONS, AUGUST 2022

Fourth Semester

Core Course - CH4CRT04 - ORGANIC CHEMISTRY-II

(Common for B.Sc Chemistry Model I ,B.Sc Chemistry Model II Industrial Chemistry, B.Sc Chemistry Model III Petrochemicals)

2020 Admission Only

5D2D1ADA

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is the hybridization of oxygen in oxonium salt?
2. What is PCC? Give any one use.
3. Name the important carboxylic acid derivative of phenol which is used as Analgesics.
4. What is the product obtained when ethers react with Con. H_2SO_4 ?
5. Write the condensation product formed between formaldehyde and ammonia. Mention any one use of it.
6. Convert benzaldehyde to Mandelic acid.
7. How will you prepare crotonaldehyde from acetaldehyde?
8. What is the chemical composition of Fehling's solution?
9. How will you convert acetonitrile to acetic acid?
10. What is the effect of heat on malonic acid?
11. What are sulphonyl chlorides?
12. Briefly explain Kolbe's Electrolysis.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Suggest a method for the conversion of
    a) 2-propanol to 2- methyl- 2-propanol
    b) Ethanol to 2-propanol

14. Briefly explain Pinacol-Pinacolone rearrangement.

15. a) Give one example of a reaction involving molecular rearrangement in an epoxide?
    b) Sterically hindered epoxides in acid conditions follow SN1 mechanism but in basic conditions follow SN2 mechanism. why?

16. What is malachite green ? How it is obtained from benzaldehyde?

17. Identify and discuss the mechanism involved in following conversions.
    a) Cyclohexanone to methylene cyclohexanone
    b) Acetaldehyde to but-2-ene

18. What are Michael addition reactions? Give the mechanism and one application.

19. What is the effect of substituents on the acid strength of monocarboxylic acid?

20. Suggest a method for the homologation of acid with mechanism by taking a suitable example.

21. How will you convert
    a) Phthalic acid to anthranilic acid
    b) Anthranilic acid to aniline

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Give any one preparation method and two uses of the following
    a) Resorcinol b) Quinol c) nitrophenol d) picric acid

23. How the following conversions are effected and explain
    a) $CH_3CH=CHCHO$ to $CH_3CH_2CH_2CH_2OH$
    b) C_6H_5CHO to $C_6H_5CH=CHCO_2H$
    c) $C_6H_5COCH_3$ to $C_6H_5COCH=CH_2$

24. Convert the following

1. Acetic acid to propionic acid
2. Propionic acid to acetic acid
3. Benzaldehyde to cinnamic acid
4. Acetone to 3-methyl, 2- butenoic acid

25. Give any one method of preparation and uses for each of the following
a) salicylic acid from anthranilic acid
b) acrylic acid from vinyl cyanide
c) cinnamic acid

(2×10=20)