24803750

QP CODE: 24803750

Reg No : .....

Name : .....

INTEGRATED MSC DEGREE EXAMINATION, JUNE 2024

Second Semester

INTEGRATED MSC BASIC SCIENCE-CHEMISTRY

CORE - ICH2CR03 - BASIC LEVEL IN ORGANIC CHEMISTRY

2020 Admission Onwards

DCF374DC

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What is inductive effect ? Give an example.
2. Why carbonium ion formed from an alkene is more stable?
3. Draw the reactants, transition state and products for Br. + CH4 → HBr + .CH3
4. What do you know about Anti-Markovnikov rule?
5. What do you mean by the term anti-aromatic compound? Give examples.
6. What are the concepts that account for the stability of benzene nucleus?
7. Write a note on the preparation of Resorcinol and their uses.
8. Write one method for preparation of Aldehydes from Esters.
9. Arrange the following compounds in increasing order of their reactivity in nucleophillic addition reaction, (a) Benzaldehyde, p-chloro benzaldehyde, p-Nitrobenzaldehyde
10. Give one chemical test to distinguish between benzaldehyde and benzophenone

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain Wagner-Meerwein rearrangementt reaction with examples.
12. Explain the rearrangment reaction and redox reaction with an example.

13. Explain the preparation of alkynes by dehydrohalogenation of vicinal and gem dihalides .
14. How will you covert benzene to naphthalene?
15. Expalin the preparation of alcohols using Grignard reagent, ester hydrolysis and reduction of carbonyl compounds.
16. Expalin the preparation of diols, and its oxidative cleavage of diols using lead tetraacetate and periodic acid.
17. Explain the reactions with mechanism a) Mannich reaction b) Michael reaction c) Robinson annulation
18. Write a short note on benzil- benzilic acid rearrangement with mechanism.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. What are E1 and E2 reactions? Explain the mechanism of reaction with an example. Briefly explain the Saytzeff and Hoffman rule with example.
20. Write notes on (a) 1,3 dipolar addition of alkenes and (b) free radical allylic substitution in alkenes (c) addition of carbenes to alkenes.
21. How can you prepare naphthalene and anthracene from benzene?
22. Explain the reactions with mechanism a) Clemmensen reduction b) Wolff-Kishner reduction c) Meerwein-Pondorff-Verley reduction d) reduction with LiAlH4 and NaBH4.

(2×5=10 weightage)