

M.Phil/Pre Ph.D Regular & Supplementary Examinations – OCTOBER, 2023
R210203

Paper –III: ORGANIC SYNTHESIS.
Chemistry

Time : 3 hrs

Maximum Marks : 100

Answer One Question from Each Unit
All Questions Carry Equal Marks

UNIT - I

1. a) Write the principles of crystallization process and purification process of carbon tetrachloride.
b) Write the purification and drying method of diethyl ether.
OR
2. a) Explain the principle of various drying techniques.
b) Write the purification process of acetone and DMSO.

UNIT- II

3. a) Write the preparation and properties of organo lithium reagents.
b) Write the preparation and synthetic applications of organo metallic reagents.
OR
4. Write the properties and synthetic applications of organo metallic reducing reagents

UNIT-III

5. a) Write the reaction and mechanism of a lot and Benzoin condensations.
b) Explain Fries rearrangement.
OR
6. a) Write and explain the mechanism of Cannizarro reaction and Perkin reaction.
b) Explain Frieal Craft reaction mechanism.

UNIT-IV

7. a) Explain the nomenclature and classification of heterocyclic compounds with examples.
b) Discuss the heterocyclic chemistry of Furan and Pyridine.
OR
8. a) Discuss the Heterocyclic chemistry of Purine and Thiophena.
b) Discuss the Heterocyclic chemistry of Oxazole.

UNIT-V

9. a) What are carbon nano6tubes? Explain the structures of single and multiwalled carbon nano tubes.
b) Write the adsorption and mechanical properties of carbon nano tubes.
OR
10. a) Write the synthesis of carbon nano tubes by controlled orientation method.
b) Write the optical properties of carbon nano tubes and its applications.
