

Government General Degree College, Dantan-II
B. Sc (H) 2nd Semester Internal Evaluation-2020

Subject: Chemistry

Paper: CC-4 (T+P)

F.M: 20 (Theory) + 10 (Practical)

Time: 2 h

Answer any **one question** from each Part.

Part A : Organic Chemistry (Theory)

1. (a) Between phenol and acetic acid, which one is more acidic?
(b) Aniline is weaker base than primary aliphatic amine. – Explain.
(c) Compare the acidity order of p-iodophenol and p-fluorophenol.
(d) The enol content of acetylacetone at equilibrium is very large in hexane (92%), medium in acetonitrile (58%) and small in water (15%). – Explain.
2. (a) The tendency for the SN² mechanism to operate will be $MeBr > EtBr >^i PrBr >^t BuBr$ and the reverse tendency for the SN¹ mechanism. – Explain.
(b) Explain why halogen atom of vinyl chloride is less reactive than that of halogen atom of ethyl chloride.
(c) 1-chloroapocamphane is completely inert both to SN¹ and SN² reaction. – Explain.
(d) Explain why I⁻ ion is a good nucleophile as well as good leaving group. – Explain.
3. (a) What do you mean β-elimination reaction? How many types of β-elimination are there?
(b) Compare the rate of base catalyzed dehydrobromination of diastereomeric 1-bromo 1,2-diphenylpropane.
(c) Write notes on E¹CB mechanism.
(d) What types of stereochemical requirement is necessary for E² mechanism.
4. (a) Site example of Pro-R and Pro-S designation.
(b) What do you mean by homotopic and enantiotopic ligand.
(c) Explain Re and Si face.

Part B : Organic Chemistry (Practical)

1. Write the procedure for the preparation of m-dinitrobenzene from nitrobenzene.
2. Write the procedure for the preparation of m-dinitrobenzene to m-nitroaniline.
3. Write the procedure for the preparation of benzoic acid from benzylalcohol.
4. Write the procedure for acetylation of phenols.