

School of Basic and Applied Sciences

Chemistry
ETE - May 2023

Time : 3 Hours

Marks : 50

SEM IV - MSCH6002 - REAGENTS AND HETEROCYCLIC CHEMISTRY

Your answer should be specific to the question asked

Draw neat labeled diagrams wherever necessary

1. Explain Birch reduction with example. K2 CO1 (2)
2. Explain Sharpless Epoxidation briefly. K2 CO2 (2)
3. Identify the synthetic uses of DDQ and explain its structure. K3 CO3 (2)
4. Identify which is more basic among the following with reason.
pyrrole, pyridine, piperidine and methyl amine K3 CO4 (2)
5. Analyze the uses of sulphadiazine. K4 CO5 (2)
6. Predict the product by reaction of 4-tertbutyl cyclohexanone with LAH with stereochemistry. K3 CO1 (5)
7. Analyze Baeyer-Villiger Rearrangement with mechanism for $C_6H_5COCH_3$. K4 CO2 (5)
8. Imagine why green synthesis of paracetamol is preferred over conventional synthesis? K6 CO6 (6)
9. Examine the following reactions giving mechanism
a. Acetic acid with methanol in presence of DCC
b. Acetic acid with methyl amine in presence of DCC K4 CO3 (8)
10. a. Examine Pall-Knorr synthesis with mechanism. K4 CO4 (8)
b. Analyze the product formed by Nitration of pyrrole.
11. Interpret how you synthesize Sulphanilamide from aniline and explain the steps of reaction. K5 CO5 (8)