

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)MSc DEGREE EXAMINATION DECEMBER 2018
(Second Semester)Branch – CHEMISTRY-**A**ORGANIC CHEMISTRY-II

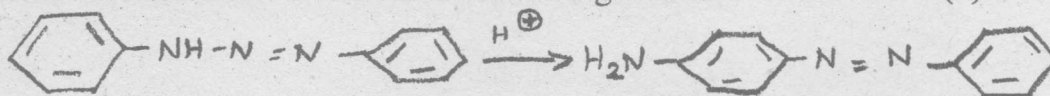
Time : Three Hours

Maximum : 75 Marks

Answer **ALL** questions**ALL** questions carry **EQUAL** marks

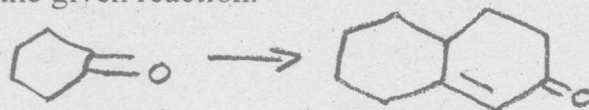
(5 x 15 = 75)

- 1 a Discuss the SE^1 mechanism. (3)
- b Differentiate SE^2 from SN^2 reactions. (3)
- c Nitration of aniline with con HNO_3 /con H_2SO_4 yields mainly m-nitro aniline instead of o-& p-product. Explain. (3)
- d Explain Rierner – Tieman reactions in pyrrole with suitable mechanism. (4)
- e Write the mechanism for Gattermann-koch reaction. (2)
- OR
- f Discuss the effect of substrate on SE^1 & SE^2 reactions (4)
- g Explain 2,6- dimethyl derivative of N,N – dimethyl aniline does not couple with diazocation, however, N,N – dimethyl aniline readily couples with diazocation. (3)
- h Discuss the mechanism of stork- enamine reaction and list out the salient features of this reaction. (5)
- i Offer the suitable mechanism for the following reaction. (3)

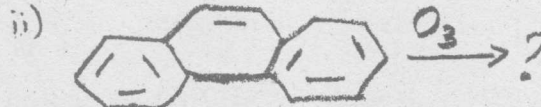


- 2 a What are the factors that favour E, CB mechanism? (3)
- b Discuss the mechanism of pyrolytic elimination in xanthates. (3)
- c Explain Erythro isomer of 1-bromo,1,2 –diphenyl propare undergoes base induced dehydrobromination at a much slower reate than the threo isomer does (4)
- d Illustrate the oxidation reaction of CrO_3 based reagents. (5)
- OR
- e Explain zaitser's and hofmann rule with examples (6)
- f Write short notes on i) Birch reduction ii) MPV reduction (6)
- g Why E_2 reactions are stereospecific? (3)

- 3 a Discuss the electrophilic addition reactions in allene system (3)
- b Different prevost and woodward's reaction with suitable example. (5)
- c Addition of HBr to propene follows Markovnikov's rule, while in presence of H_2O_2 follows anti-Markovnikov's rule. Explain with mechanism. (5)
- d Write a mechanism for witting reaction. (2)
- OR
- e Illustrate stobe condensation with mechanism. (4)
- f How will you achieve cis and trans diol from alkenes? (3)
- g By applying Mannich reaction and condensation reaction. How will you convert the given reaction. (3)



- h Discuss the importance of hydorboration reaction in organic synthesis. (5)
- 4 a Explain the use of carbobenzyliry chloride and p-nitro phenol in peptide syntheris. (6)
- b Describe any one methods each to identity N-terminal and C-terminal amino residence in peptide. (3)
- c Discuss the functions of nucleic acids. (3)
- d Write any one carboxylation reaction where on enzyme participate. (3)
- OR
- e Write short notes on Merrifield synthesis. (5)
- f Explain the factors that will influencing enzyme action. (5)
- g Differentiae nucleoside and nucleotide. (5)
- 5 a What are phase transfer catalyst? Why it is very useful when organic reaction carry out in aqueocs medium? Explain with example. (4)
- b How does Dec act as dehydrating agent? (3)
- c Outline the preparation and any four synthetic application of trimethyl silyl iodide. (6)
- d Complete the following reactions. (2)



OR

- e Illustrate umpolung behaviors with suitable example. (5)