

M-6322

M.Sc. (IInd Semester) Examination, 2020

CHEMISTRY

(Organic Chemistry - II)

Time Allowed : Three Hours

Maximum Marks : 70

Note : Attempt all the five questions. One question from each unit is compulsory. Marks are indicated against the questions.

Unit - I

Q. 1. Discuss the mechanisms of Stobbe reaction and Michael addition. 14

Or

Describe the following :

- (i) Hydration of olefins and acetylenes 7
- (ii) Carbenes and their addition to double bonds. 7

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P.T.O.

(2)

Unit - II

Q. 2. Discuss various reductions with LiAlH_4 , NaBH_4 and Trialkyltin Hydride. 14

Or

Describe the following : 14

- (i) Ozonolysis
- (ii) Oxidation of alcohols

Unit - III

Q. 3. Discuss the mechanism of following rearrangements : 14

- (a) Stevens rearrangement
- (b) Dienone-phenol rearrangement

Or

Discuss Pinacol-Pinacolone and Baeyer-Villiger rearrangement with suitable examples. 14

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(3)

Unit - IV

Q. 4. Discuss the following : **14**

(a) Curtin-Hammett principle

(b) Isotope effect

Or

Describe the following :

(a) Alterant and non-alterant hydrocarbons **6**

(b) Resonance and field effects **8**

Unit - V

Q. 5. Discuss the preparation and important reactions

of the following : **14**

(a) Purines

(b) Thiazole

(4)

Or

(a) Discuss the synthesis of vitamin 'A'. **7**

(b) Discuss the conversion of cholesterol to

progesterone **7**

