

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-II • EXAMINATION – WINTER -2020

Subject Code: BP202TP

Date: 06/03/2020

Subject Name: Pharmaceutical Organic Chemistry I

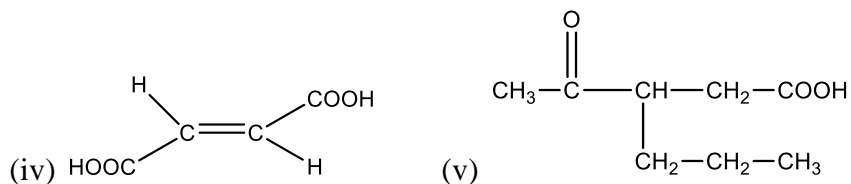
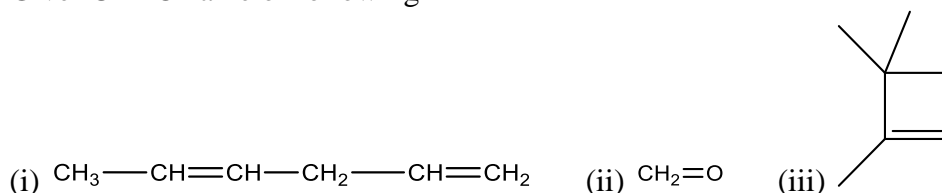
Time: 10:30AM TO 12:30PM

Total Marks: 54

Instructions:

1. Attempt any THREE questions from Q-1 to Q-6.
2. Q.7 is compulsory to attempt.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

- Q.1** (a) Define structural isomerism. Give different structural isomers of hexane **06**
 (b) Give IUPAC name of following **05**



- (c) What do you mean by Markownikoff's orientation? Explain with examples **05**
- Q.2** (a) Write a detail note on halogenation of alkanes **06**
 (b) Draw the structure of the following **05**
 (i) 2-propyl-1-pentene (ii) 3-cyanopentanoic acid (iii) 3-pentanone (iv) Benzyl bromide (v) Salicylic acid
 (c) Explain mechanism and stereochemistry of Diels-Alder reaction **05**
- Q.3** (a) Write a brief note on (i) Ozonolysis (ii) Saytzeffs Rule **06**
 (b) Differentiate between E_1 and E_2 reactions **05**
 (c) Discuss the factors affecting S_N2 reaction **05**
- Q.4** (a) Give qualitative tests, structure and uses of (i) Chlorobutanol (ii) Cetosteryl alcohol (iii) Benzyl alcohol **06**
 (b) Explain mechanism and kinetics of S_N1 reactions **05**
 (c) Give structure and uses of (i) Amphetamine (ii) Hexamine **05**
- Q.5** (a) Explain the terms with examples (i) Benzoin condensation (ii) Electromeric effect **06**
 (b) What is a nucleophilic addition reaction? Why do carbonyl compounds undergo nucleophilic addition? **05**
 (c) Give brief account on acidity of carboxylic acids **05**
- Q.6** (a) Give structure and uses of (i) Chloroform (ii) Dichloromethane (iii) Ethylchloride **06**
 (b) Give structure and uses of (iii) Citric acid (iii) Methyl salicylate **05**
 (c) Explain the effect of substituents on basicity of aliphatic amines **05**

Q.7 (a) Give qualitative tests and structure of (i) Paraldehyde (ii) Cinnamaldehyde (iii) Vanilin **06**

OR

(a) Explain the mechanism of Cannizzaro reaction **06**

OR

(a) Give brief account on rearrangement of carbocations **06**
