

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 2- EXAMINATION –WINTER - 2018

Subject Code:BP202TP

Date: 11/12/2018

Subject Name: Pharmaceutical Organic Chemistry I

Time:02:30 PM TO 05:30 PM

Total Marks: 80

Instructions:

- 1. Attempt any five questions.**
- 2. Make Suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) Give the structure and uses of the following **06**
(1) Paraldehyde (2) Salicylic acid (3) Cetosteryl alcohol
(4) Vanilin (5) Chloral hydrate (6) Ethylenediamine
- (b) Explain in detail about Grignard reaction for the synthesis of Alkanes and Alcohols. **05**
- (c) Write a note on Aldol condensation. **05**
- Q.2** (a) What is isomer? Classify structural isomer with examples. **06**
(b) Give three methods for synthesis of alkenes. **05**
(c) Mention any three Nucleophilic addition reactions for aldehydes. **05**
- Q.3** (a) Write a note on Benzoin condensation & Perkin condensation, **06**
(b) Write the mechanism and limitations of Friedel-Crafts acylation of Ketones. **05**
(c) Give the uses of paraffin. Discuss about stability of conjugated dienes. **05**
- Q.4** (a) Give general method for preparation and reaction of aliphatic amines. **06**
(b) Write short notes on SN2 reaction in detail. **05**
(c) Differentiate between E2 and E1 mechanism of elimination with example. **05**
- Q.5** (a) Differentiate Markownikoff's addition and Anti-markownikoff's addition to alkene. **06**
(b) Describe the factors affecting the E1 and E2 reaction. **05**
(c) Write name of qualitative tests for identification of carboxylic acid, ester, amide, alcohol and aliphatic amine. **05**
- Q.6** (a) Comment: (1) Order for basicity of amine is $2^\circ > 1^\circ > 3^\circ$ in aqueous solution. **06**
(2) Carboxylic acid is less stable as compare to its anion form.
(3) Bromination of alkane is more selective then chlorination.
- (b) State the Saytzeff rule. What is pyrolysis? Give general reaction of pyrolysis for alkane. **05**
- (c) Write the structure and IUPAC name of followings: (1) Neopentane **05**
(2) Isopentane (3) Allylbromide (4) Isopropanol (5) Vinyl chloride
- Q.7** (a) Explain cannizzaro and cross cannizzaro reaction with mechanism. **06**
(b) Write note on Diel-Alder reaction. **05**
(c) Describe ozonolysis of alkene in detail. **05**
