

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.**

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|-------------|------------|--|-----------|
| Q.1 | (a) | Give the structure and uses of the following
(1) Paraldehyde (2) Salicylic acid (3) Cetosteryl alcohol
(4) Vanilin (5) Chloral hydrate (6) Ethylenediamine | 06 |
| | (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.
(2) Carboxylic acid is less stable as compare to its anion form.
(3) Bromination of alkane is more selective then chlorination. | 06 |
| | (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
(2) Isopentane (3) Allylbromide (4) Isopropanol (5) Vinyl chloride | 05 |
| 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 |
