

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER- 2 EXAMINATION – WINTER -2019**

**Subject Code: BP202TP****Date: 17-12-2019****Subject Name: Pharmaceutical Organic Chemistry I****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

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

- |             |   |           |
|-------------|---|-----------|
| <b>Q.1</b>  | (a) Give the methods for the preparation of carboxylic acid.  | <b>06</b> |
|             | (b) Explain Aldol and Crossed aldol condensation.   | <b>05</b> |
|             | (c) Explain classification of organic compounds with example.   | <b>05</b> |
| <b>Q.2</b>  | (a) Give the structure and uses of (i) Formaldehyde (ii) Paraldehyde (iii) Chloral hydrate (iv) Vaniline (v) Cinnamaldehyde (vi) Hexamine             | <b>06</b> |
|             | (b) Give the general methods for the preparation of amines.   | <b>05</b> |
|             | (c) Explain mechanism of (i) Cannizaro reaction (ii) Perkin condensation.   | <b>05</b> |
| <b>Q.3</b>  | (a) Discuss classification of alcohols. What happens when they are dehydrogenated catalytically?  | <b>06</b> |
|             | (b) Differentiate markownikoff's and anti- markownikoff's rules with suitable examples.   | <b>05</b> |
|             | (c) Give the methods of preparation of carbonyl compounds.  | <b>05</b> |
| <b>Q.4</b>  | (a) Give the structure and uses of (i) Dimethyl phthalate (ii) Dichloromethane (iii) Benzoic acid (iv) Ethanolamine (v) Oxalic acid (vi) Amphetamine. | <b>06</b> |
|             | (b) Define saytzeff's rule with one example.  | <b>05</b> |
|             | (c) Write note on dines.  | <b>05</b> |
| <b>Q.5</b>  | (a) Give in detail on structural isomerisms in organic compounds.   | <b>06</b> |
|             | (b) Describe two methods of preparation and two chemical properties of alcohols.  | <b>05</b> |
|             | (c) Explain diels-alder reaction.   | <b>05</b> |
| <b>Q. 6</b> | (a) Give the mechanism of E <sub>1</sub> and E <sub>2</sub> reaction.   | <b>06</b> |
|             | (b) Give methods for the preparation of Alkanes.  | <b>05</b> |
|             | (c) Note on hybridization in alkanes.   | <b>05</b> |
| <b>Q.7</b>  | (a) Discuss SN <sup>1</sup> and SN <sup>2</sup> reaction.   | <b>06</b> |
|             | (b) How does structure effect the basicity of amines?   | <b>05</b> |
|             | (c) How will you separate 1°, 2° and 3° amines by Hinsburg method? Give equations also.   | <b>05</b> |

\*\*\*\*\*