

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph.- SEMESTER-II • EXAMINATION – SUMMER -2021

Subject Code: BP202TP**Date: 27/08/2021****Subject Name: Pharmaceutical Organic Chemistry-I****Time: 10:30AM to 01:30PM****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 (i) Formaldehyde (ii) Paraldehyde (iii) Chloral hydrate (iv) Vaniline (v) Cinnamaldehyde (vi) Hexamine | 06 |
| | (b) | How does structure effect the basicity of amines? | 05 |
| | (c) | How will you separate 1°, 2° and 3° amines by Hinsburg method? Give equations also. | 05 |
| Q.2 | (a) | How would you get
(1) Benzoic acid from toluene
(2) Benzyl alcohol from benzoic acid
(3) Benzene from benzoic acid. | 06 |
| | (b) | Give the general methods for the preparation of aromatic amines. | 05 |
| | (c) | Explain mechanism of (i) Cannizaro reaction (ii) Perkin condensation. | 05 |
| Q.3 | (a) | Discuss classification of alcohols. What happens when they are dehydrogenated catalytically? | 06 |
| | (b) | Explain Aldol and Crossed aldol condensation. | 05 |
| | (c) | Give the methods of preparation of carbonyl compounds. | 05 |
| Q.4 | (a) | Discuss SN ¹ and SN ² reaction. | 06 |
| | (b) | Define saytzeff's rule with one example. | 05 |
| | (c) | Write down the mechanism of Wurtz reaction. | 05 |
| Q.5 | (a) | Give the mechanism of E ₁ and E ₂ reaction. | 06 |
| | (b) | Describe two methods of preparation and two chemical properties of alcohols. | 05 |
| | (c) | Explain diels-alder reaction. | 05 |
| Q. 6 | (a) | Give methods for the preparation of Alkanes. | 06 |
| | (b) | Differentiate markownikoff's and anti- markownikoff's rules with suitable examples. | 05 |
| | (c) | Note on hybridization in alkanes. | 05 |
| Q.7 | (a) | Give the structure and IUPAC name of (i) Formic acid (ii) Acetone (iii) Acetylene (iv) Ethylamine (v) Dimethylether (vi) Acetaldehyde. | 06 |
| | (b) | Explain classification of organic compounds with example. | 05 |
| | (c) | Give in detail on structural isomerisms in organic compounds. | 05 |
