

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm . - SEMESTER– II • EXAMINATION – SUMMER -2020

Subject Code:BP202TP**Date: 27-10-2020****Subject Name: Pharmaceutical organic chemistry- I****Time: 10:30 AM TO 1:30 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) Write a note on Markovnikov's orientation. | 06 |
| | (b) Draw the structure of following compounds,
A. Chloral hydrate D. Citric acid
B. Chlorobutanol E. Iodoform
C. Vanillin F. Benzyl benzoate | 05 |
| | (c) Differentiate: SN ₁ and SN ₂ reactions | 05 |
| Q.2 | (a) Write any three reactions of Amines. | 06 |
| | (b) Write a note on Diels-alder reaction with examples. | 05 |
| | (c) Discuss factor affecting E ₁ reaction. | 05 |
| Q.3 | (a) Explain reaction with mechanism of Cannizaro reaction and Benzoin condensation. | 06 |
| | (b) Write detail notes on carbocation. | 05 |
| | (c) Give qualitative tests of ketones. Give structure and uses of acetone and hexamine. | 05 |
| Q.4 | (a) Explain reaction with mechanism of Aldol and crossed Aldol condensation. | 06 |
| | (b) Explain chlorination of methane with mechanism in details. | 05 |
| | (c) Give two methods for synthesis of alkyl halides. | 05 |
| Q.5 | (a) Write a note on acidity of carboxylic acids. | 06 |
| | (b) Explain: SP hybridization in alkenes with examples. | 05 |
| | (c) Give the reaction of following:
1. Ozonolysis
2. Perkin condensation | 05 |
| Q. 6 | (a) Write short notes on resonance and inductive effect. | 06 |
| | (b) Give the preparation and reactions of conjugated dienes. | 05 |
| | (c) Give structural formula of the following compounds:
1. Isopentene
2. 2, 3 diethyl -4- pentyne
3. 2,2,4,5 tetramethyl hexane
4. 2- methoxy pentane
5. 2, 3 dimethyl -3- hexene | 05 |
| Q.7 | (a) Give the reaction of following:
1. Allylic rearrangement
2. Electrophilic addition reaction of alkenes
3. Anti markownikoff's orientation | 06 |
| | (b) Justify:
1. Lower alcohols are insoluble in water.
2. Primary carbocation is more stable than tertiary carbocation. | 05 |
| | (c) How Grignard reagent prepared? Write synthetic utility of Grignard reagents. | 05 |