

GUJARAT TECHNOLOGICAL UNIVERSITY

Pharm D – 1st Year • EXAMINATION – SUMMER - 2018

Subject Code: 818804

Date: 25/05/2018

Subject Name: Pharmaceutical Organic Chemistry

Time: 10:30 AM TO 1:30 PM

Total Marks: 70

Instructions:

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

- Q.1** (a) Classify Intramolecular Forces and Explain Bond dissociation Energy. **06**
(b) Explain Following Terms **04**
1. Heterolysis
2. Homolysis
3. Dipole-Dipole interaction
4. Polarity of bond
(c) Explain the reactivity and stability of free radical. **04**
- Q.2** (a) Discuss the mechanism and stereochemistry of SN1 AND SN2 reaction. **06**
(b) Write a note on Carbocations with mechanism. **04**
(c) Write a note on: Methods of preparation of cycloalkanes. **04**
- Q.3** (a) Explain the influence of activating and deactivating groups on the electrophilic substitution of benzene. **06**
(b) Explain oxidation-reduction reaction with examples. **04**
(c) Give chemical structure and IUPAC name of following **04**
2,2,4-Trimethylpentane, 1-methoxy-2-propanol, 2-Nitrophenol, Vinyl bromide
- Q.4** (a) Give the preparation, test of purity, assay and medicinal use of **06**
1. chlorbutol
2. Sodium lauryl sulphate.
(b) Differentiate E1 and E2 reaction. **04**
(c) Explain the halohydrin formation. **04**
- Q.5** (a) Explain the following: **06**
1. aldol condensation
2. Sandmeyer's reaction
(b) Explain the cycloaddition reaction. **04**
(c) Explain the resonance and hyper-conjugation. **04**
- Q.6** (a) Comment on the following **06**
1. Meta nitro benzoic acid is more acidic than Para nitro benzoic Acid
2. Pyridine is aromatic
3. All Lowrie-Bronsted acids and bases can be Lewis acids and bases but all Lewis acids and bases cannot be Lowrie-Bronsted acids and bases
(b) Write detail note on Nucleophilic substitution bimolecular. **04**
(c) Explain Isomerism in organic compound **04**
- Q.7** (a) Explain the Perkin condensation and Kolbe reaction. **06**
(b) Write free radical halogenations reaction of alkenes. **04**
(c) Write a note on Markownikov's rule in detail. **04**