Seat No.: _____ Enrolment No. _____

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 1. Heterolysis 2. Homolysis 3. Dipole-Dipole interaction 4.Polarity of bond	**04**
	(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 electrophillic substitution of benzene.	**06**
	(b)	Explain oxidation-reduction reaction with examples.	**04**
	(c)	Give chemical structure and IUPAC name of following 2,2,4-Trimethylpentane, 1-methoxy-2-propanol,2-Nitrophenol ,Vinyl bromide	**04**
Q.4	**(a)**	Give the preparation, test of purity, assay and medicinal use of 1. chlorbutol 2. Sodium lauryl sulphate.	**06**
	(b)	Differentiate E1 and E2 reaction.	**04**
	(c)	Explain the halohydrin formation.	**04**
Q.5	**(a)**	Explain the following: 1.aldol condensation 2.Sandmeyer's reaction	**06**
	(b)	Explain the cycloaddition reaction.	**04**
	(c)	Explain the resonance and hyper-conjugation.	**04**
Q. 6	**(a)**	Comment on the following 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	**06**
	(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**

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