

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III (New) EXAMINATION – WINTER 2018
Subject Code:2133501
Date:28/11/2018
Subject Name:Organic Chemistry
Time:10:30 AM TO 01:00 PM
Total Marks: 70
Instructions:

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

		MARKS
Q.1*	(a) Give IUPAC names of	03
	(i) $\text{CH}=\text{CH}-\text{CH}(\text{NH}_2)-\text{CH}=\text{CH}-\text{CH}_2-\text{COOH}$	
	(ii) Glycerol	
	(iii) $\text{C}(\text{CH}_3)_4$	
	(b) Write a note on Benzidine Rearrangement?	04
	(c) Give the reactions of phenol.	07
Q.2	(a) Why is fluoro acetic acid more stronger acid than acetic acid?	03
	(b) (a) Give R and S configuration of	04
	(i) $\begin{array}{c} \text{Br} \\ \\ \text{H}-\text{C}-\text{COOH} \\ \\ \text{CH}_3 \end{array}$	(ii) $\begin{array}{c} \text{C}_5\text{H}_{11} \\ \\ \text{Cl}-\text{C}-\text{H} \\ \\ \text{CHO} \end{array}$
	(b) Give E and Z configuration of	
	(i) $\begin{array}{c} \text{Br} \quad \quad \text{CH}_3 \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{Cl} \quad \quad \text{C}_2\text{H}_5 \end{array}$	(ii) $\begin{array}{c} \text{NC} \quad \quad \text{C}_2\text{H}_5 \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{H}_3\text{C} \quad \quad \text{C}_5\text{H}_{11} \end{array}$
	(c) Explain mechanism of Hydroboration-oxidation reaction.	07
	OR	
	(c) Explain Meso compounds and write a note on different methods of resolution.	07
Q.3	(a) Explain the difference between E1 and E2 mechanism	03
	(b) Explain conformers of Ethane.	04
	(c) Explain SN1 mechanism in detail.	07
	OR	
Q.3	(a) Explain the importance of knowing mechanism of any chemical reaction.	03
	(b) Explain : Hyperconjugation and Resonance	04
	(c) Explain the generation , stability and reactions of carbonium ion	07
Q.4	(a) What is the importance of mechanism in organic synthesis.	03
	(b) Explain generation and stability of carbocation	04

- (c) Give the methods of synthesis of aromatic amines? Give the reactions of aniline with (i) Acetyl chloride (ii) Benzaldehyde (iii) Methyl iodide (iv) BDC (v) Potassium Dichromate 07

OR

- Q.4 (a) Explain ozonolysis. 03
(b) Give the reactions of Bromobenzene with Ethyl bromide, KNH_2 , NiAl/NaOH and Mg/ether . 04
(c) In which mechanism we get inversion of symmetry? Explain it. 07

- Q.5 (a) Explain stereoisomerism in tartaric acid. 03
(b) Explain Cannizaro reaction. 04
(c) Write a note on Pinacol-Pinacolone rearrangement. 07

OR

- Q.5 (a) Explain conformers of butane. 03
(b) Write a note on aldol and cross aldol reaction. 04
(c) Explain the mechanism of Hofmann reaction. 07

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