

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- III (New) EXAMINATION - WINTER 2019

Subject Code: 2130501

Date: 7/12/2019

Subject Name: Organic Chemistry and Unit Processes

Time: 02:30 PM TO 05:00 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) Explain Markovinkov's rule	03
	(b) Write the reaction mechanism of formation of Schiff base	04
	(c) Describe the rules for R/S nomenclature	07
Q.2	(a) Write the synthesis of Furan and thiophen	03
	(b) Why the racemic mixture is formed in the case of S_N1 reaction.	04
	(c) Give the two examples of nucleophile. Write note on nucleophilic addition reaction	07
	OR	
	(c) Write note on synthesis of antiseptics drug	07
Q.3	(a) Explain octane and cetane number	03
	(b) Define specific rotation. Write note on polarimeter	04
	(c) Describe the method for cane sugar from sugarcane	07
	OR	
Q.3	(a) Write method for synthesis of amide, anhydride, acid chloride and ester from carboxylic acid	03
	(b) Write the uses of protein	04
	(c) Describe the elucidation process of ketohexoses	07
Q.4	(a) Write the applications of dyes	03
	(b) Explain sulphonation of benzene, nitrobenzene and toluene	04
	(c) Define isoelectronic point. Write note on secondary and tertiary structure of protein.	07
	OR	
Q.4	(a) Why the aldohexoses reducing Fehling and tollens reagents	03
	(b) Write the optical isomer of Malic acid and Tartic acid	04
	(c) Write preparation method of congo red, malachite green and crystal violet	07
Q.5	(a) Give the two name of reactions in which nitrene intermediate was involved. Write the mechanism of one them	03
	(b) Write note on classification of dyes bases on application	04
	(c) Write a note on Baeyer and Hoffman reactions	07
	OR	
Q.5	(a) Give the classification of protein according to composition.	03
	(b) Define chromophor and auxochrome and explain their significant.	04
	(c) Write the preparation method for formic acid and acetic acid	07
