

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

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

Subject Code: 2133605	Date: 30/11/2019
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**Subject Name: Organic Chemistry for Technologists** 

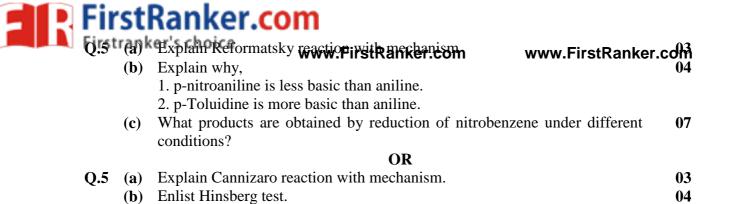
Time: 02:30 PM TO 05:00 PM	Total Marks: 70
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## **Instructions:**

1	Attempt all	amostions
	Attenior an	anesmons.

- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

			MARKS
Q.1	(a) (b)	Write a short note on Inductive effect with example. What is essential difference between a free radical reaction and an ionic reaction?	03 04
	(c)	Explain SN <sup>1</sup> & SN <sup>2</sup> reaction with mechanism.	07
Q.2	(a)	Write a note on Kolbe reaction.	03
	<b>(b)</b>	Explain Saytzeff rule with example.	04
	(c)	Explain mechanism of diazotization reaction.  OR	07
	(c)	Explain friedel crafts Alkylation & Acylation with mechanism.	07
Q.3	(a)	Write a note on Chloramine T.	03
	<b>(b)</b>	How does aniline react with;	04
		1.Aldehyde	
		2.Bromine	
		3.Chloroform and alc.KOH	
		$4.\text{NaNO}_2$ at 0 to $5^{\circ}\text{C}$	
	<b>(c)</b>	Explain Mannich reaction with mechanism.	07
0.3	( )	OR ·	0.2
Q.3	(a)	Give use & synthesis of DDT.	03
	<b>(b)</b>	Draw structure corresponding to the following IUPAC names: i. 4-Hexen-3-one	04
		ii. 2-Butenal	
		iii. 2-Methyl-4-oxobutanoic acid	
		iv. Ethyl propanoate	
	(c)	Explain Curtius reaction with its mechanism.	07
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Q.4	(a)	Write a short note on Diels-Alder reaction.	03
	<b>(b)</b>	Write the IUPAC names for each of the following compounds:	04
		i. CH <sub>3</sub> CH <sub>2</sub> CH(OCH <sub>3</sub> )CH <sub>2</sub> COCl	
		ii. CH <sub>3</sub> CH <sub>2</sub> COCH <sub>2</sub> CH <sub>2</sub> COOH	
		iii. CH <sub>3</sub> CH=CHCH <sub>2</sub> CHO	
		iv. $CH_2=CH-CH_2CH=CH_2$	
	(c)	How will you convert primary amide to primary amine? Give name of the	07
		reaction and explain its mechanism also.	
0.4	( )	OR	0.2
Q.4	(a)	Write a short note on Birch reduction.	03
	<b>(b)</b>	How will you convert; a. benzene → benzyl alcohol	04
		a. benzene → benzyl alconol b. Aniline → m-Nitro aniline	
	(c)	Explain Aldol and Cross aldol reaction with mechanism.	07
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(c) Explain Arndt Estert reaction with its mechanism.

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