Seat No.: _____ A **T** -

		GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-III(New) • EXAMINATION – WINTER 2016		
Subject Code:2130501 Date:11/01/				
Sub	iect N	Name:Organic Chemistry and Unit Processes	_01/	
Tim	ر ject آ م۰۱۸۰	\cdot 30 A M to 01.00 PM Total Mar	- ks· 70	
1 IIII Instr	C.IV.		KS. /U	
msu	1.	s. Attempt all questions.		
	2.	Make suitable assumptions wherever necessary.		
	3.	Figures to the right indicate full marks.		
01		Short Questions	14	
Q.1	1	What do you understand by electrophile?	14	
	2	Define enantiomers		
	3	Differentiate between drug and disinfectant		
	4	State two sulfonating agents		
	5	Explain acidity constant (K_{a})		
	6	State two applications of stearic acid		
	7	Which compounds are called heterocyclic compounds?		
	8	Define isoelectric point.		
	9	What do you understand by amphoteric nature?		
	10	What are antibiotics?		
	11	What is cracking?		
	12	Define octane number.		
	13	Differentiate between chromophore and auxochrome.		
	14	State two antibacterial drugs.		
Q.2	(a)	Explain the synthesis of toluene from benzene by alkylation reaction using Friedel - Craft's catalyst.	03	
	(b)	Stating the necessary conditions for a compound to show optical	04	
		isomerism, explain optical isomerism in lactic acid.		
	(c)	What do you understand by reaction intermediate? State and discuss	07	
		about any three reaction intermediates.		
		OR		
	(c)	What do you understand by S_N^1 reaction and S_N^2 reaction? Discuss about each with suitable examples.	07	
Q.3	(a)	Briefly discuss the effect of substituents on the acidity of monocarboxylic acids.	03	
	(b)	Describe R, S notations used in fixing the positions of groups in an	04	
		What is vineger? How is sectioned and medward by swick vineger process?	07	
	(C)	State the applications of acetic acid produced by quick vinegar process?	07	
		State the applications of acetic acid.		
03	(9)	With reactions explain the preparation of any two derivatives of	03	
Q.J	(a)	carboxylic acids	05	
	(b)	Briefly discuss the preparation and uses of naphthalene.	04	
	(c)	With mechanism, explain the applications of the following reactions.	07	
	(-)	(i) Diazotisation reaction; (ii)Sandmeyer reaction.		
0.4	(a)	Explain how you will convert an aldopentose into aldohexose.	03	
·	(b)	With a neat diagram of Schmid nitrating reactor, describe the nitration of	04	
	~ /	benzene.		
	(c)	With a neat diagram, describe the manufacturing of cane sugar from	07	
		sugarcane.		
		OR		
Q.4	(a)	What do you understand by isoeletric point of amino acids? Explain.	03	

(a) What do you understand by isoeletric point of amino acids? Explain. Q.4

	(b)	Discuss the classification and isolation or proteins.	04
	(c)	What do you understand by synthetic petrol? With a neat flow diagram,	07
		describe Fischer – Tropsch method for the production of gasoline.	
Q.5	(a)	Discuss the classification of dyes based on applications.	03
	(b)	Briefly explain molecular orbital (MO) theory of colours.	04
	(c)	Discuss the preparation and uses of alizarin and phenolphthalein.	07
		OR	
Q.5	(a)	Draw the structure of aspirin. How is it produced?	03
	(b)	Write a short note on antibacterial drugs.	04
	(c)	What is catalytic cracking? Briefly describe fixed – bed catalytic cracking method for the production of gasoline.	07
