Seat No.: Enroli	nent No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII • EXAMINATION - SUMMER 2014

Sub	ject	Code: 180502 Date: 31-05-2014	
Sub	ject]	Name: Petroleum Refining and Petrochemicals	
		0:30 am TO 01:00 pm Total Marks: 70	
Instr			
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
	<i>J</i> .	right es to the right indicate full marks.	
Q.1	(a) (b)	Discuss the composition of Petroleum and general properties of homologous series. Differentiate between thermal cracking and catalytic cracking.	07 07
Q.2	(a)	Explain Atmospheric distillation and Vacuum distillation of crude oil explaining difference between them.	07
	(b)	Why coke should be removed from crude? Discuss process of flexi coking in detail. OR	07
	(b)	Differentiate between moving bed crackers and fluidized bed crackers. Explain working of Air lift thermofor catalytic cracker with neat sketch.	07
Q.3	(a)	Discuss thermal properties of petroleum fractions in detail.	07
	(b)	Describe Catalytic desulfurization with neat diagram in detail. OR	07
Q.3	(a)	Define and explain significance: 1.Cetane number 2.Smoke point 3.Characterization factor.	07
	(b)	Why dewaxing is necessary? Discuss MEK dewaxing with neat flow diagram.	07
Q.4	(a)	Discuss major engineering problems, properties and uses of Acetic acid.	07 07
	(b)	Write short note on Aviation turbine fuels . OR	U/
Q.4	(a)	Describe with diagram the manufacturing process of LDPE along with its properties and uses.	07
	(b)	Explain manufacturing of ethylene via steam cracking of Naphtha and gas oil.	07
Q.5		Discuss major Engineering problems involved in the production of SBR. Define petrochemicals and list out important raw materials commonly used in manufacture of	07
	(b)	petrochemicals. Name important petrochemical plants in India. OR	07
Q.5	(a)	Describe manufacture of Poly vinyl chloride with neat flow sheet along with its application.	07
	(b)	Discuss manufacture of Ethylene glycol with neat flow diagram.	07
