Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER – V-EXAMINATION – WINTER 2015

Subject Code: 350503 **Date: 08/12/2015**

Subject Name: Petroleum Refinery and Petrochemical Technology

Time: 10:30 AM TO 1:00 PM **Total Marks: 70**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Each question carry equal marks (14 marks)**

Q.1	(a)	Define:(1) API (2) RON (3)Cloud point (4) Aniline point (5) Fire point (6)Smoke point (7) Diesel Index	**07**
	(b)	Write a short note on occurrence and history of Petroluem.	**07**
Q.2	(a)	Describe Dehydration and Desalting of Crude petroleum.	**07**
	(b)	Explain Cracking and Reforming and discuss the effect of temperature and pressure on it.	**07**
		OR	
	(b)	Short note on composition of Petroleum.	**07**
Q.3	(a)	List out various desalting methods and explain any one in detail.	**07**
	(b)	Discuss the Pipe still heaters with neat sketches.	**07**
		OR	
Q.3	(a)	Differentiate between phenol extraction method and furfural extraction method.	**07**
	(b)	List the various test methods for Gasoline and explain ASTM distillation.	**07**
Q.4	(a)	Describe the manufacturing process of Methanol with neat and clean flow diagram.	**07**
	(b)	Explain the tower arrangement in fractionation of petroleum.	**07**
		OR	
Q. 4	(a)	Discuss the need of Additives for Diesel and give the example.	**07**
	(b)	Brief note on development of petroleum industry in Gujarat and India.	**07**
Q.5	(a)	Describe the manufacturing process of Ethylene dichloride with detail flow diagram.	**07**
	(b)	What is sweeting and sweating? Explain the need of both and list the various methods for both.	**07**
		OR	
Q.5	(a)	Discuss the treatment of Kerosene by liquid SO_2 extraction process.	**07**
	(b)	Write about the types of Refinery and Refinery processes.	**07**

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