

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024****Subject Code:3160510****Date:22-05-2024****Subject Name:Petroroleum Refining and Petrochemicals****Time:10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define any two properties employed for Gasoline and its significance.	03
	(b) Discuss classification of crude oil in brief.	04
	(c) Discuss the recent scenario of production of crude oil and refineries in India.	07
Q.2	(a) Discuss briefly; Aniline point and Diesel Index.	03
	(b) Discuss in brief Atmospheric Distillation Unit.	04
	(c) Discuss any three tests for testing of kerosene in detail.	07
	OR	
	(c) Discuss about different types of additives added in gasoline and their functions.	07
Q.3	(a) Explain in brief: Cetane Number and its significance.	03
	(b) Write short note on Electric desalting process.	04
	(c) Discuss with neat diagram Fluid catalytic cracking in detail..	07
	OR	
Q.3	(a) Draw neat sketch of ASTM distillation apparatus	03
	(b) Mention the different tests recommended for diesel fuels? Discuss any two.	04
	(c) Discuss in detail about catalytic reforming with neat sketch.	07
Q.4	(a) Explain briefly delayed coking.	03
	(b) Discuss in brief about Merox sweetening process for gasoline.	04
	(c) Discuss manufacturing process of Methanol with neat sketch.	07
	OR	
Q.4	(a) Discuss properties of LPG.	03
	(b) Discuss major engineering problems involved in production of PVC.	04
	(c) With the help of a detailed flow diagram explain the manufacturing process of Ethylene.	07
Q.5	(a) Discuss cloud point and pour point test.	03
	(b) Explain the major engineering problems involved in the manufacturing of Methanol.	04

- (c) Discuss manufacturing process of HDPE with neat sketch along with its application. **07**

OR

- Q.5** (a) Discuss properties and applications of Polypropylene. **03**
(b) Explain True boiling point test with neat sketch. **04**
(c) Discuss with neat flow diagram the manufacturing process of Ethylene dichloride. **07**
