

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (old) - EXAMINATION – SUMMER 2018

Subject Code:180502

Date:30/04/2018

Subject Name:Petroleum Refining & 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.**

Q.1 (a) Explain Atmospheric distillation and Vacuum distillation of crude oil explaining difference between them. **07**

(b) Discuss the origin and formation of petroleum along with organic theories. **07**

Q.2 (a) State the desirable characteristics and important tests of diesel and kerosene. Discuss various additives of diesel along with their purposes **07**

(b) Why coke should be removed from crude? Discuss process of flexi coking in detail **07**

OR

(b) Define (a) API (b) Octane number (c) Flash and fire point (d) Diesel index (e) smoke point (f) Cloud point. **07**

Q.3 (a) Discuss manufacturing process of LPG with flow sheet. **07**

(b) Write a note on propane deasphalting. **07**

OR

Q.3 (a) What is sweetening? Explain oxidation of mercaptans to disulfides. **07**

(b) Discuss about two important properties for Kerosene. **07**

Q.4 (a) Describe the manufacturing process methanol along with its application **07**

(b) Describe with a neat flow diagram manufacture of Ethylene Oxide. **07**

OR

Q.4 (a) Explain manufacturing process with complete flow sheet of styrene butadiene rubber with its application **07**

(b) Write a note on manufacturing of vinyl acetate and its uses **07**

Q.5 (a) Compare LDPE and HDPE. Discuss the manufacturing process of LDPE. **07**

(b) Write short note on growth of petrochemical sector and challenges ahead.

OR

Q.5 (a) Discuss manufacture of acetic acid. **07**

(b) Describe manufacturing process of poly vinyl chloride. List out the required raw materials and related chemical reaction. **07**
