

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (old) - EXAMINATION – SUMMER 2018****Subject Code:180502****Date:30/04/2018****Subject Name:Petroroleum 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**
