

(3 Hours)

[Total Marks : 80]

N.B. : (1) Question No. 1 is compulsory.

(2) Solve any three questions from the remaining questions.

(3) Neat flow sheets must be drawn whenever necessary

Q 1. Explain and discuss the importance of following: **(20)**

- (a) Reid Vapour Pressure.
- (b) Origin Theory of petroleum
- (c) Sweet and Sour crude.
- (d) ASTM and True Boiling Point Distillation.

Q.2. (a) Give different testing methods to test quality of Kerosene. Explain anyone method in short with a suitable diagram. **(10)**

(b) Describe in brief the process of phenol extraction for lubricating oil. **(10)**

Q.3. (a) What is Gasoline? Explain briefly about the blending of Gasoline along its significance in refinery. **(10)**

(b) Explain the process of desalting of crude oil with suitable diagram along with its importance. **(10)**

Q.4. (a) Explain the sulfur dioxide treatment to remove aromatics from kerosene stream. **(10)**

(b) Explain hydro cracking process in detail. **(10)**

Q.5. (a) write in detail the process of visbreaking giving operating conditions & neat flow diagram. **(10)**

(b) Describe the importance of coking operation in refinery. Explain delayed coking operation in detail with a suitable flow diagram **(10)**

Q.6. Write short notes on the following. **(20)**

- (a) Polymer gasolene
- (b) Importance of Bio-refinery.
- (c) Air blowing bitumen process for asphalt
- (d) Pour Point and Smoke Point