

Q.P. Code : 814301

(3 Hours)

[Total Marks : 80

- N.B. :** (1) Question No. 1 is **compulsory**.
 (2) **Attempt** any **three** questions out of the remaining five questions.
 (3) **Figures** to the right indicate **full** marks.
 (4) Neat flow sheets must be drawn wherever necessary.

1. Explain the following :- 20
 - a) API Gravity.
 - b) Characterization factors.
 - c) Aniline point and Smoke point.
 - d) Reid Vapor Pressure.

2. a) Name the major oilfields in India. Explain the types of Indian crude oil, on the basis of its constituents, sulfur contents and API gravity. 10
 - b) Explain different tower arrangements used for crude distillation unit with a suitable diagram. 10

3. a) Name the sulfur compound present in crude oil. Describe any one method to remove sulfur from crude oil. 10
 - b) Explain the causes for overhead corrosion in crude distillation unit. 10

4. a) Name the different types of coking. Explain any one method of coking with suitable flow diagram. 10
 - b) Describe the Fluidized catalytic cacking (FCC) process with its importance in refinery. 10

5. a) What is Gasoline? Explain briefly about the blending of Gasoline. 10
 - b) Why alkylation is carried out in refinery? Give comparison between HF alkylation and sulfuric acid alkylation, stating the merits and demerits. 10

6. Write short notes on following :- 20
 - a) Electrostatic desalting process for crude oil.
 - b) Petroleum Jelly.
 - c) Diesel fuel.
 - d) Refineries in India.
