

[Time: Three Hours]

[ Marks:80]

Please check whether you have got the right question paper.

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

- Q.1** Explain and discuss the importance of following **20**
- a) ASTM distillation and TBP distillation.
  - b) UOP characterization factor and Correlation index.
  - c) Ried Vapour Pressure
  - d) Sweet and sour crude oil
- Q.2**
- a) Name the major oil fields in India along with the types of Indian crude oil. What are the different methods for locating the crude oil? **10**
  - b) Explain different tower arrangement used for crude distillation unit with a suitable diagram. **10**
- Q.3**
- a) Explain the process of desalting of crude oil with suitable diagram along with its importance. **10**
  - b) Name the different sulfur compounds present in crude oil. Describe the hydrodesulphurization process with neat diagram **10**
- Q.4**
- a) Describe the importance of coking operation in refinery. Explain delayed coking operation in detail with suitable flow diagram. **10**
  - b) Name different types of cracking process which are carried out in refinery and explain fluidized catalytic cracking process in detail. **10**
- Q.5**
- a) Explain the sulfur dioxide treatment to remove aromatics from kerosene stream. **10**
  - b) What is Gasoline? Explain briefly about the blending of Gasoline along its significance in refinery. **10**
- Q.6** Write short notes on following **20**
- a) HF Alkylation process along with its merits and demerits
  - b) Air blowing bitumen process of Asphalt
  - c) Ethanol as a bio-fuel
  - d) Petroleum jelly