

BE - sem-VII (CBSEs) chemical - Pet. Refin. Tech.
petroleum Refining
Technology

Q.P. Code : 814302

15/12/16

(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) Sweet and Sour crude.
 - b) Flash point and Fire point.
 - c) ASTM and True Boiling Point Distillation.
 - d) Viscosity Index.

2. a) Explain the organic theory for the origin of crude oil. What are the different methods for locating the crude oil? 10
b) Distinguish between pump around and pump back reflux in atmospheric distillation unit. 10

3. a) Give a brief outline of crude oil fractionation with a suitable diagram. Specify the boiling point ranges of the fractions obtained from ADU. 10
b) Explain the sulfur dioxide treatment to remove aromatics from Kerosene stream. 10

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 processes which are carried out in refinery and explain the hydrocracking process in detail. 10

5. a) Discuss in brief the process of furfural extraction for lubricating oil. What are the advantages of using furfural over phenol as a solvent? 10
b) Explain HiF alkylation process in detail and compare it with sulfuric acid alkylation process. 10

6. Write short notes on following :- 20
 - a) Composition of Crude Oil
 - b) Liquid Paraffin
 - c) Bitumen and Asphalt
 - d) Importance of Bio-refinery.