

Total No. of Questions : 10]

SEAT No. :

P3407

[5670]-683

[Total No. of Pages : 2

B.E. (Chemical)

PETROLEUM REFINING

(2015 Pattern) (Semester - I) (Elective - I) (409344D) (End Sem.)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.
- 2) Figures to the right indicates full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Assume suitable data, if necessary.

Q1) a) Define & explain the following terms **[6]**

- i) Flash Point
- ii) Cetane Number
- iii) Smoke point

b) Discuss the composition & exploration of crude oil? **[4]**

OR

Q2) a) Define and briefly explain various properties of specific types of crude oil. **[6]**

b) Discuss the tests and properties of gasoline and engine oil. **[4]**

Q3) Describe heating through exchangers and pipe still heaters. **[10]**

OR

Q4) a) Explain operation, working of thermal cracking process with typical diagram. **[5]**

b) Write recent development of FCC along with neat schematic diagram? **[5]**

P.T.O.

- Q5) a)** Explain manufacturing of Bitumen with schematic diagram. [10]
b) Explain in detail about various properties of lube oil? [6]

OR

- Q6) a)** Describe the deasphalting process with typical diagram? [10]
b) Discuss various additives for lube oil. [6]

- Q7) a)** Why desulphurization is necessary in the refinery? Discuss Hydro-desulphurization process with typical schematic diagram along with reaction and operating parameters. [12]
b) What is the blending operation and explain the line blending operation? [5]

OR

- Q8) a)** Describe the process of hydrogen treatment with typical schematic diagram. [9]
b) Write in details about Environmental aspects used in the refineries. [8]

- Q9) a)** Write in details about safety aspects used in refineries. [9]
b) Write in details about housekeeping strategies used for petroleum and petroleum products. [8]

OR

- Q10) a)** Discuss the various strategies of marketing of petroleum products. [9]
b) Write in details about transportation of petroleum products. [8]
