

Total No. of Questions : 10]

SEAT No. :

P4547

[Total No. of Pages : 2

[4959] - 1177

B.E. (Chemical Engineering)

d : PETROLEUM REFINING (Elective - I)

(2012 Pattern)

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) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

Q1) a) Explain specifications of various petroleum products? **[6]**

b) Why is it necessary to refine crude oil? **[4]**

OR

Q2) Explain various pre-refining operations? **[10]**

Q3) What is cracking operation? Differentiate between thermal cracking and catalytic cracking? **[10]**

OR

Q4) a) Describe reforming process with schematic diagram? **[6]**

b) Explain heating through exchanger and pipe still heaters? **[4]**

Q5) Explain manufacturing of Bitumen in detail. **[16]**

OR

Q6) a) Explain properties of lube oil? **[6]**

b) Explain solvent extraction process in lube oil? **[10]**

P.T.O.

Q7) Describe HDM process with neat schematic diagram. Discuss merits and demerits of process in detail? [16]

OR

Q8) a) Explain environmental pollution aspects in refinery? [8]

b) Explain sulfur recovery in refinery? [8]

Q9) What is importance of blending and additives in the petroleum products? Discuss in brief about the additives for gasoline and diesel. [18]

OR

Q10)a) Explain marketing of petroleum products? [10]

b) How safety is prime concern in any refinery? [8]

