2014-15
M.TECH. (AUTUMN SEMESTER) EXAMINATION
PETROLEUM PROCESSING AND PETROCHEMICAL ENGINEERING
PETROLEUM REFINERY ENGINEERING
PK 731 (ELECTIVE III)

Maximum Marks: 60
Credits: 04
Duration: Three Hours

Answer any FOUR questions.
Assume suitable data if missing.
All questions, and parts thereof, be started on a fresh page of the answer book(s).

Q.No. | Question | M.M.
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1. | Write notes on the following:  
   (i) Indian refining industry.  
   (ii) Distillation fractions and their quality control tests. | [15]
2. | Discuss Visbreaking, with emphasis on:  
   (i) Modes of operation, with flowsheet, process description & salient features.  
   (ii) Operating variables.  
   (iii) Major engineering aspects.  
   (iv) Economics | [15]
3. | Describe, in detail, the Delayed Coking Process with special emphasis on feed properties, operating variables, process description and flow diagram. | [15]
4. | Write a detailed note on Fluid Catalytic Cracking. | [15]
5(a) | Discuss the process of catalytic reforming with special reference to reactions involved and modes of operation. | [08]
5(b) | Differentiate between different hydrogen processes employed in a petroleum refinery such as hydrotreating, hyrocracking, hydroprocessing, etc. Discuss hydrotreating, in brief with the help of process description. | [07]