R09

Code No: C5108

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I SEMESTER EXAMINATIONS APRIL/MAY-2012
PETROLEUM REFINERY ENGINEERING
(CHEMICAL ENGINEERING)

Time: 3hours **Max.Marks:60**

Answer any five questions
All questions carry equal marks

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1. Discuss the past, present and future of petroleum industry. Recommend a suitable strategy to meet the present and future requirement of hydrocarbons.

2.a) Discuss PONA analysis and its importance.
b) How do we characterize complex feed stocks?

3.a) Discuss simple methods to define conversion of complex feed stocks.
b) Discuss the problem associated with the heavier feeds as feed for thermal / catalytic crashing.

4.a) Discuss ethanol dehydration process to produce ethylene.
b) Discuss important features of R – K theory.

5. Discuss global economic scenario of petrochemical industry with suitable examples.

6. Discuss inhibition of coke formation during thermal and catalytic cracking reaction.

7. Enlist and discuss various models of coke formation during thermal cracking of hydro carbons.

8. Write short notes on any three:
i) Thermal cracking ii) Catalytic cracking
iii) Hydro cracking iv) VGO as feed stock for thermal cracking
v) Partial oxidation.

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