R09

Code No: C5108

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I Semester Examinations March/April-2011
PETROLEUM REFINERY ENGINEERING
(CHEMICAL ENGINEERING)

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

Answer any five questions
All questions carry equal marks

\- - -

1. a) Discuss the Scenario of Petrochemicals in detail.
   b) Discuss briefly about Characterization of complex feed stocks. [12]

2. a) Write different techniques involved in Thermal Cracking briefly.
   b) Discuss briefly about Steam Reforming. [12]

3. a) Explain Thermal cracking operation to produce light olefins from various feed stocks.
   b) How Ethanol dehydration process is carried out? Explain with a neat flow diagram. [12]

4. a) Discuss the effect of various parameters like temperature, residence time, HCCP, C/H ration on yields of important products from various feed stocks during Thermal cracking operation.

   during thermal cracking. [12]

5. With a neat flow diagram explain the process of Thermal Cracking operation. [12]

6. a) Explain briefly the Coke formation during cracking operations
   b) Discuss briefly the simple models of Coke formation during thermal cracking reactions. [12]

7. a) What is Pyrolysis? Explain in detail the structures of deposited coke during Pyrolysis operation.
   b) Discuss briefly various ways to inhibit coke formation. [12]

8. a) Suggest newer materials of construction pertaining to petrochemical industry problems.
   b) Discuss industrial process of hydro cracking and reforming operations briefly. [12]

* * * * *