Total No. of Questions : 10]

SEAT No. :

P3215

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[5354]-730-A
B.E. (Chemical) (Semester - II)
PETROCHEMICAL ENGINEERING
(2012 Pattern) (Elective - IV)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) *Answer any five questions.*
2) *figures to the right indicate full marks.*
3) *Neat diagrams must be drawn wherever necessary.*
4) *Assume suitable data, if necessary.*

Q1) Write down the importance of Petrochemicals and status of Petrochemical industries in India **[10]**

OR

Q2) What are the main basic building blocks of petrochemical industry explain with suitable examples? Give the details of petrochemical products that are produced from benzene? **[10]**

Q3) Explain with neat diagram process for Benzene production and list out its derivatives. **[10]**

OR

Q4) Write in details about the various separation and purification techniques used in Petrochemical industry? **[10]**

Q5) a) With neat sketches explain in detail about production ethylene glycol as a second generation intermediates. **[8]**

b) Write a note on furnaces used in petrochemical plants. **[8]**

OR

Q6) Enumerate the synthetic chemical intermediates and products from olefins and describe the production of ethylene by naphtha cracking process. **[16]**

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Q7) a) Define polymerization. Describe the steps and mechanisms of condensation Polymerization. **[8]**

b) Explain the various applications of polymers in chemical industries. **[8]**

OR

Q8) a) With neat sketches explain in detail about production of Nylons along with its engineering Problems. **[8]**

b) What are various polymeric products? Differentiate between different polymerization Processes. **[8]**

Q.9) Discuss about recent advances in petrochemical plants & refineries in India.**[18]**

OR

Q10) Write a note on following: **[18]**

a) Safety consideration in petrochemical plants

b) Integration of refinery and petrochemical plants.

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