

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 151857

Roll No.

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B.TECH.

Theory Examination (Semester-VIII) 2015-16

PETROCHEMICAL TECHNOLOGY

Time : 3 Hours

Max. Marks : 100

Note : Attempt all Sections.

Section-A

1. Attempt ALL of the following : (2×10 = 20)

- (a) What is Syn Gas?
- (b) Define steam reforming.
- (c) Explain petroleum coke. Write its applications.
- (d) Define steam cracking of hydrocarbons.
- (e) Write the properties of Adipic acid.
- (f) What is chemical formula of Bisphenol-A, caprolactum?
- (g) What is the application of heat exchanger in petrochemical?

(1)

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- (h) Write the industrial problems in manufacturing of Methanol?
- (i) What is Oxo process?
- (j) What is the use of maleic anhydride?

Section-B

2. Attempt any FIVE of the following : [10×5=50]

- (a) Define hydroforming. With the help of neat and clean sketch explain hydro reforming.
- (b) Give the flow sheet of chloromethane.
- (c) Write the chemical reactions in manufacturing of acetic acid. Discuss the industrial problems in acetic acid plants.
- (d) What are the various applications of acetaldehyde, vinyl acetate and Perchloroethylene.
- (e) With the help of neat flow sheet explain the manufacturing of toluene.
- (f) What is Cumene? Explain its manufacturing process and also write its various industrial problems.

- (g) Write the manufacturing process of Formaldehyde.
- (h) Discuss Effluent Treatment plant in petrochemical industries.

Section-C

Attempt any TWO of the following

(15×2=30)

3. Discuss the scenario of production and consumption pattern of petrochemical industries in India.
4. Write the various energy conservation and diversification techniques used in petrochemical industries.
5. Write short notes on any three of the following:
 - i. Ethylene Glycol
 - ii. Vinyl acetate
 - iii. Refinery off-gases
 - iv. Fuel oils