

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

Paper ID : 2289894

Roll No.

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## B.TECH

### Regular Theory Examination (Odd Sem-VII) 2016 - 17 PETROCHEMICAL TECHNOLOGY

*Time : 3 Hours*

*Max. Marks : 100*

#### SECTION - A

1. Attempt all parts. Write answer of each part in short.  
(10×2=20)

- a) Write the industrial applications of petroleum coke.
- b) Write short note on Refinery off gasses.
- c) Define the Petrochemicals.
- d) What is the importance of hydro forming of petroleum stocks?
- e) What is Dowtherm?
- f) Why quenching is carried out?
- g) Define synthesis gas.
- h) Write the applications of Naphtha's

- i) What is partial oxidation?
- j) Classify the various types of petro chemicals.

**SECTION - B**

**2. Attempt any five questions for this section.(5×10=50)**

- a) Discuss the production and consumption pattern of petrochemicals in India.
- b) Discuss the feedstock's of Petrochemicals Natural gas, LPG and Naphtha industries in India.
- c) Discuss the manufacturing process of Acetic acid by carbonylation with the help of flow sheet also mention the uses of Acetic acid.
- d) What are chloromethane? Discuss the manufacturing process of Trichloroethylene with the help of flow sheet.
- e) Explain the process of manufacturing of vinyl chloride by ethylene dichloride thermal pyrolysis with flow sheet and also mention the major engineering problems involved.
- f) Explain the process of manufacturing of Cumene with flow diagram and also mention the chemical reactions involved.
- g) Discuss the manufacturing process of Isopropanal with the help of flow sheet and also mention the uses of Isopropanal.

- h) Discuss the manufacturing process of Butadiene with the help of flow sheet and also mention the chemical reactions involved.

**SECTION - C**

**Note: Attempt any two questions for this section**

**(2×15=30)**

- 3. Describe manufacturing process for Carprolactam via dehydrogenation of cyclohexanone along with major engineering problems.
- 4. Discuss the manufacturing process of phthalic anhydride with the help of flow sheet and also mention the uses of phthalic anhydride.
- 5. Explain the process of manufacturing of Benzene with flow diagram and also mention the chemical reactions involved.