

- Q.27 Write about properties and use of butanol.  
 Q.28 With flow sheet discuss about styrene.  
 Q.29 Explain manufacturing of Ethylene dichloride.  
 Q.30 Write the difference between C<sub>3</sub> & C<sub>4</sub> Compounds.  
 Q.31 Write about Maleic and phthalic anhydride.  
 Q.32 Discuss the properties of any two C<sub>2</sub> Compound.  
 Q.33 Explain any five raw materials required for petrochemical in detail.  
 Q.34 Write short notes on IUPAC naming of Alkenes.  
 Q.35 Write about properties and major engg. problems of formaldehyde.

#### Section-D

**Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)**

- Q.36 What is aromatic compound. With flow sheet explain the process of manufacturing of Phenol.  
 Q.37 With flow sheet diagram, discuss the manufacturing process of ethylene oxide and also discuss any two major Engg. Problems.  
 Q.38 Write short notes on any three.  
   a) Terephthalic Acid  
   b) Butadiene  
   c) Acrylonitrile  
   d) Ethanol.

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#### **5th Sem., Branch : Chem Subject : Petrochemicals Technology**

Time : 3 Hrs. M.M. : 100

#### SECTION-A

**Note: Multiple type Questions. All Questions are compulsory. (10x1=10)**

- Q.1 The first crude oil refinery of India is located at  
   a) Naharkatiya                  b) Digboi  
   c) Kochi                          d) Madras  
 Q.2 Ethenylebenzone is IUPAC name of \_\_\_\_\_.  
   a) Styrene  
   b) Aromatics  
   c) Styrene butadiene rubber  
   d) None of the above  
 Q.3 Which of the following is a secondary raw material produced from propylene?  
   a) Acrylic acid                  b) Isoprene  
   c) Vinyl Acetate                d) Methanol  
 Q.4 Which of the following end product is produced by ethylene obtained from petroleum?  
   a) Formaldehyde                b) Esters  
   c) Cellulose acetate            d) Synthetic rubber

- Q.5 Which of the following is the simplest aromatic hydrocarbon  
a) Nitrobenzene      b) Cyclohexane  
c) Cumene      d) Benzene
- Q.6 The petrochemical product which is generally used for medical purpose  
a) Ethanol      b) PVC  
c) Benzene      d) Cumene
- Q.7 Which of the following substance is not aromatic compound?  
a) Benzene      b) Styrene  
c) Phenol      d) Hexane
- Q.8 Buna-s is also called  
a) Polyurathene  
b) Styrene Butadiene Rubber  
c) Teflon  
d) Bakelite
- Q.9 Which catalyst is used in the manufacture of acrylonitrile from propylene-ammonia-air oxidation process?  
a) Molybdenum bismuth  
b) Molybdenum  
c) Silver  
d) Iron
- Q.10 What is the molecular weight of methanol?  
a) 32      b) 31  
c) 28      d) 34

### Section-B

**Note: Objective type questions. All questions are compulsory.** (10x1=10)

- Q.11 Define Petrochemical.  
Q.12 What is the significance of IUPAC naming?  
Q.13 Write formula for formaldehyde.  
Q.14 Write one use of ethanol.  
Q.15 What is C<sub>3</sub> compound?  
Q.16 Write two properties of butanol.  
Q.17 Name any two raw materials used in petrochemical plant.  
Q.18 Write about functional group of ketone.  
Q.19 State one use of methanol.  
Q.20 Write functional group of Aldehydes.

### Section-C

**Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions.** (12x5=60)

- Q.21 Write about naphtha cracking.  
Q.22 Discuss major petrochemicals from petroleum products.  
Q.23 Explain IUPAC Naming for functional group like Alcohol, Ester, Carboxylic acids.  
Q.24 Write about properties and major Engg. Problems (any five) of Methanol.  
Q.25 Explain the process of vinyl chloride.  
Q.26 Write about properties and major Engg. Problem of cumene.