

- Q.30 Explain manufacturing of ethylene dichloride.  
 Q.31 Explain manufacturing of butadiene.  
 Q.32 Discuss about naphtha cracking.  
 Q.33 With Flow sheet, discuss about maleic anhydride.  
 Q.34 Describe the IUPAC naming of any two functional group.  
 Q.35 Write about the Properties and uses for rubber.

### **SECTION-D**

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

- Q.36 With flow sheet, explain the manufacturing of ethanol with its properties.  
 Q.37 Define C3 compound. With flow sheet, explain the process of manufacturing of acetone.  
 Q.38 Write short note on any three:-  
   1. Phenol  
   2. Properties of C1 compound  
   3. Terephthalic acid  
   4. Styrene.

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**5th Sem / Branch : Chemical Engg.**  
**Sub.: Petrochemicals Technology**

Time : 3Hrs.

M.M. : 100

### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Which of the following raw material obtained from petroleum can be in preparation of acetic acid?  
   a) Acetone                    b) Phosphoric acid  
   c) Ethylene                    d) Tartaric acid  
 Q.2 Which of the following is the simplest aromatic hydrocarbon?  
   a) Nitrobenzene              b) Cyclohexane  
   c) Cumene                     d) Benzene  
 Q.3 Ethylene can be produced from ethane by \_\_\_\_\_  
   a) Catalytic cracking        b) Thermal cracking  
   c) Catalytic reforming        d) Hydro forming  
 Q.4 C1 compounds are  
   a) Metanol                    b) Synthetic gas  
   c) Phenol                     d) Both A & B  
 Q.5 Which of the following is a non-petroleum source?  
   a) CaC<sub>2</sub>                    b) H<sub>2</sub>S  
   c) Paraffin                    d) Olefin

- Q.6 Which of the following is a thermoplastic?  
a) Polystyrene      b) Ethylene  
c) Propylene      d) Ortho xylene
- Q.7 Chemical plants produce olefins by steam cracking of natural gas liquids like ethane and propane  
a) True      b) False
- Q.8 What is the ideal pressure for the manufacture of acetone by dehydrogenation of isopropanol?  
a) 50-100 atm      b) 900-1000 atm  
c) 250-350 atm      d) 3-4 atm
- Q.9 How can we minimize the formation of polyalkylbenzene in the manufacture of cumene?  
a) Using low benzene and propylene feed  
b) Using high benzene and propylene feed  
c) Using a high-end catalyst  
d) Using a low-end catalyst
- Q.10 What is the molecular weight of ethylene oxide?  
a) 44      b) 43  
c) 45      d) 46

### SECTION-B

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

- Q.11 Name examples of C1 compounds.  
Q.12 What is formula of methanol.

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- Q.13 Write formula for Ethane.  
Q.14 What is C2 compound?  
Q.15 What is cetane number?  
Q.16 Write two properties of butanol.  
Q.17 Name any one Aromatic compound.  
Q.18 Writes one examples of C4 compound.  
Q.19 Define Petrochemical Technology?  
Q.20 Name raw material used in Petrochemical industry?

### SECTION-C

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

- Q.21 Discuss about Cumene.  
Q.22 Describe about manufacturing of phthalic anhydride.  
Q.23 Discuss formaldehyde with flow sheet.  
Q.24 Explain the IUPAC naming of alkanes and cyclic compound.  
Q.25 Write about properties and uses of acrylonitrile.  
Q.26 Write the difference between petrochemical and petroleum products.  
Q.27 Explain the process of vinyl chloride.  
Q.28 Write about C1 compound.  
Q.29 Discuss major petrochemicals products from petroleum.

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