

- Q.31 Discuss the methods employed in the purification of petroleum products, highlighting the importance and challenges associated with this process.
- Q.32 Discuss the major petrochemicals derived from petroleum products and their industrial applications.
- Q.33 Discuss the manufacturing process of butanol, including the synthesis routes, catalyst selection, and process parameters.
- Q.34 Discuss the major engineering problems encountered in the manufacture of acetone, such as by product formation, energy efficiency, and solvent recycling.
- Q.35 Define petrochemicals and elaborate on the raw materials used in their production.

Section-D

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

- Q.36 Discuss the manufacturing processes involved in producing Ethanol, including the raw materials, reaction mechanisms, and catalysts used.
- Q.37 Describe the manufacturing process of vinyl chloride, highlighting the chemical reactions involved, raw material selection, and process conditions.
- Q.38 Write short note on any three:-
- Aromatic compound
 - Classify petrochemical
 - Butanol
 - Transportation of crude oil

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5th Sem., Branch : P & P

Subject : Petroleum Refining & Petrochemicals

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 What is the primary purpose of the purification of petroleum products?
- To increase viscosity
 - To remove impurities
 - To enhance color
 - To reduce boiling point
- Q.2 Which petrochemicals is commonly used as a feedstock for the production of plastics?
- Ethanol
 - Methanol
 - Ethylene
 - Butanol
- Q.3 Which process is used for Petroleum refining?
- Crystallization
 - Fractional distillation
 - Decantation
 - Sublimation
- Q.4 Which functional group is present in the compound CH_3COOH ?
- Alcohol
 - Aldehyde
 - Carboxylic acid
 - Ketone
- Q.5 Methanol is produced by the catalytic oxidation of which compound?
- Methane
 - Ethane
 - Propane
 - Butane

- Q.6 Acetone is commonly used as a solvent in which industry?
a) Pharmaceutical b) Paints & coatings
c) Textile d) All of the above
- Q.7 Phenol is _____ type of compound?
a) Alkane b) Alkene
c) Alkyne d) Aromatic compound
- Q.8 What is the primary used of Toluene?
a) Feedstock for explosives
b) Solvent
c) Flavoring agent
d) Antioxidant
- Q.9 Which compound is primarily used as a precursor for synthetic rubber?
a) Butanol b) Butadiene
c) Butanal d) Butene
- Q.10 The chemical composition of carbon in petroleum is
a) 10.0 to 14.0% b) 83.0 to 87.0%
c) 0.05 to 6.0% d) 0.1 to 2.0%

Section-B

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

- Q.11 Name any two properties of Petroleum?
- Q.12 Write the one use of Methanol.
- Q.13 Give example of C3 compound?
- Q.14 Write full form of CNG?
- Q.15 Write one application of petrochemical?
- Q.16 Write formula of API gravity.

- Q.17 Name any one refinery in India.
- Q.18 Which functional group is present in a butanol molecule?
- Q.19 Write IUPAC name of ketone.
- Q.20 Write one uses of diesel.

Section-C

- Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)**
- Q.21 Provide examples and systematically name each compound type according to IUPAC rules.
- Q.22 Explain the manufacturing about methanol with its formula and its properties.
- Q.23 Illustrate a flow sheet of a petroleum refinery and explain the uses of various refinery products.
- Q.24 Provide a detailed explanation of the fractional distillation process of crude oil, including the products obtained and their respective boiling ranges.
- Q.25 Explain the principles of IUPAC naming for various organic compounds, including alkanes, alkenes and aromatic compounds.
- Q.26 Discuss about major petrochemical from petroleum products.
- Q.27 Explain about manufacturing of phenol.
- Q.28 Difference between C2 and C3 compound.
- Q.29 Write about pretreatment of Petroleum.
- Q.30 Describe the composition of petroleum and classify it based on its properties.