

- Q.29 Write a detailed overview of the fractional distillation process of crude oil, including the principles, equipment used, and separation of products.
- Q.30 Define petrochemicals and explain their significance in the chemical industry.
- Q.31 Describe the properties and uses of C₃ compounds, emphasizing acetone.
- Q.32 Write the refinery product uses.
- Q.33 Write about the Composition and classification of petroleum
- Q.34 Explain aromatic compound over C₃ compound.
- Q.35 With flow sheet, the manufacturing processes for ethanol, including raw materials, reactions involved and key equipment.

SECTION-D

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

- Q.36 Evaluate significant engineering problems associated with aromatic compound manufacturing, particularly in the case of phenol.
- Q.37 Describe the manufacturing about PVC with flow sheet and its properties.
- Q.38 Write short note on any three:-
- a) Butanol
 - b) Raw material for petrochemical industry
 - c) crude oil
 - d) Fractional distillation

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5th Sem / P & P

Subject:- Petroleum Refining and Petrochemicals

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Which C₃ compound is commonly used in nailpolish removers?
- a) Acteone
 - b) Methanol
 - c) Ethanol
 - d) Propanol
- Q.2 What is the primary or main method used to seperate different components of crude oil in a refinery?
- a) Cracking
 - b) Polymerization
 - c) Fractional distillation
 - d) Hydrogenation
- Q.3 What is the IUPAC name for the alkane with three carbon atoms?
- a) Ethane
 - b) Methane
 - c) Propane
 - d) Butane
- Q.4 Which C₁ compound is commonly used as a solvent and antifreeze?
- a) Methanol
 - b) Ethanol
 - c) Propanol
 - d) Butanol
- Q.5 What is the primary use of butanol in industry?
- a) Production of synthetic rubber
 - b) Fuel additive
 - c) Paint and varnish manufacturing
 - d) Food flavoring

- Q.6 Which functional group does the compound CH_3COOH belong to?
a) Alcohol b) Aldehyde
c) Carboxylic acid d) Ketone
- Q.7 What is the main purpose of the purification process in petroleum refining?
a) To increase the boiling points of products
b) To remove impurities and contaminants
c) To reduce the viscosity of crude oil
d) To enhance coloration of products
- Q.8 Production of plastics like PVC is manufacture by the use of _____
a) C_4 compound b) C_1 compound
c) C_3 compound d) C_2 compound
- Q.9 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 %
- Q.10 What is the definition of petrochemicals?
a) Compounds derived from plants and animals
b) Chemicals derived from petroleum and natural gas
c) Organic compounds found in rocks and minerals
d) Synthetic materials used in construction

SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

- Q.11 Write one advantage of petrol.
Q.12 What is the primary use of methanol in industry?
Q.13 What are the products of fractional distillation of crude oil?

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- Q.14 Write full form of CNG?
Q.15 Write one use of C_1 compound?
Q.16 Write IUPAC name of aldehyde.
Q.17 Name any one petrochemical plant in India.
Q.18 Define petrochemical?
Q.19 Write formula for API gravity
Q.20 Which functional group is present in a butanol molecule?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

- Q.21 Discuss about IUPAC naming of Ketones, Ester, Carboxylic acid.
Q.22 Write about Composition and classification of petroleum
Q.23 Describe the methods and challenges involved in the transportation of crude oil and its refined products.
Q.24 Describe the properties, applications, and industrial significance of C_1 compounds like methanol.
Q.25 With examples and explain the step-by-step procedures for naming organic compounds using IUPAC rules.
Q.26 Provide a list of major petrochemical plants in India, highlighting their contributions to the industry and the economy.
Q.27 Explain the manufacturing process for butanol, including raw materials, chemical reactions, and equipment.
Q.28 Difference between C_1 and C_2 compound.

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