

- Q.26 With flow sheet, describe the manufacture of ethylene oxide.
- Q.27 Write uses of vinyl chloride.
- Q.28 Draw the flow sheet of methanol.
- Q.29 Write the industrial uses of SBR.
- Q.30 Write the major engineering problem for manufacturing of butadiene.
- Q.31 Name five chemicals which can be derived from C₃ compounds and state one use of each.
- Q.32 Write the major engineering problem for manufacturing of phthalic anhydride.
- Q.33 Write the uses of cumene.
- Q.34 Write the major engineering problem for manufacturing of styrene.
- Q.35 Give uses of butanol.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain the process description of manufacturing of vinyl chloride with neat clean diagram.
- Q.37 With flow sheet diagram, describe the manufacture of Acrylonitrile and Phenol from cumene.
- Q.38 Explain the manufacturing process of formaldehyde with diagram. Also write major engineering problems.

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Chemical Engineering **Subject:-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 are petrochemical classes?
- a) olefins b) aromatics
 - c) Both A and B d) None of the above
- Q.2 With increase in the number of carbon and hydrogen atoms in hydrocarbon molecules, the density of petroleum products
- a) Decreases b) Increases
 - c) Remain same d) none
- Q.3 The general formula of naphthenes is
- a) C_nH_{2n+2}
 - b) C_nH_{2n-6} (where, n≥6)
 - c) C_nH_{n-4}
 - d) Same as that for olefins i.e. C_nH_{2n}
- Q.4 Carbon percentage (by weight) in crude petroleum may be about
- a) 65 b) 75
 - c) 85 d) 95

- Q.5 Tetrachloroethylene also called?
a) vinyl chloride b) perchloroethylene
c) polyvinyl chloride d) isopropyl alcohol
- Q.6 Natural Gas largely constitutes of which of the mentioned?
a) Ethane b) Methane
c) Butane d) Pentane
- Q.7 Which reagent is used as suppressing agent in direct oxidation of ethylene?
a) Ethylene oxide b) Ethylene chloride
c) Ethylene dichloride d) Ethylene
- Q.8 Catalyst used in direct oxidation of ethylene is _____
a) Magnesium oxide b) Sodium oxide
c) Silver oxide d) Manganese oxide
- Q.9 Which method is used for the manufacture of industrial acrylonitrile?
a) Propylene-ammonia-air oxidation process
b) Catalytic dehydrogenation of isopropanol
c) Propylene alkylation of benzene
d) Contact process
- Q.10 Which process is used for the manufacture of styrene?
a) Dehydrogenation of ethyl benzene
b) Hydrogenation of acetophenone
c) Hydrogenation of toluene
d) Benzene sulphurated process

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Write the name of any one theory of origin of petroleum.
Q.12 Write the one name of cyclic compounds.
Q.13 Name one important chemical derived from C₂ compound.
Q.14 Write the use of methanol.
Q.15 Expands LPG.
Q.16 Write down the structure of benzene.
Q.17 Write the uses of Butadiene.
Q.18 Write the chemical formula of methanol.
Q.19 Name one chemical derived from acetylene.
Q.20 Name any one chemicals derived from Butenes.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Discuss the major petrochemicals from petroleum products.
Q.22 Enlist the major petrochemicals plants in India.
Q.23 Name five chemicals which can be derived from ethylene and state one use of each.
Q.24 Discuss the IUPAC name of alcohol and ester with examples.
Q.25 Name five chemicals which can be produced by starting from propylene and state one use of each.