

- 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 C_3 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, $n \geq 6$)
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 C_2 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.