

- Q.26 Discuss about Origin of petroleum with diagram.
 Q.27 Explain distillation with diagram.
 Q.28 Write about cloud and pour point.
 Q.29 Discuss pretreatment of crude oil and its product.
 Q.30 Write MEK dewaxing process.
 Q.31 Differentiate between octane and cetane number?
 Q.32 Explain deasphalting process.
 Q.33 With flow sheet, discuss about the sulphuric acid polymerization process.
 Q.34 Write about the furfural extraction process.
 Q.35 Write about equilibrium flash vaporization curve

SECTION-D

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

- Q.36 Discuss the desulphurization of petroleum and explain Doctor's sweetening process with neat and clean flow sheet.
 Q.37 What is reforming? With flow sheet, explain the process of fixed bed reforming process.
 Q.38 Write short note on any three:-
 1. Catalytic reforming
 2. Aniline point
 3. Refinery products
 4. Electric desalting

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5th Sem / Branch : Chemical Engg. Sub. : Petroleum Refining

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 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) Unpredictable from the data
 Q.2 Which of the following has maximum hydrogen/carbon ratio (by weight)?
 a) Naphtha b) Gasoline
 c) Diesel d) Fuel oil
 Q.3 The first crude oil refinery of India is located at
 a) Naharkatiya b) Kochi
 c) Digboi d) Madras
 Q.4 For gasoline, the flash point (<50°C) is determined by the
 a) Abel apparatus
 b) Pensky-Marten's apparatus

- c) Sayboltchromo meter
 - d) None of these
- Q.5 C_nH_{2n} is the general formula for
- a) Olefins b) Naphthenes
 - c) Both A and B d) Neither A nor B
- Q.6 Solvent used for dewaxing of petroleum products are
- a) Furfural
 - b) Methyl ethyl ketone (MEK)
 - c) Propane
 - d) Both B & C
- Q.7 Which of the following contains maximum sulphur?
- a) Diesel b) Petrol
 - c) Kerosene d) Fuel oil
- Q.8 Petroleum
- a) Is optically active
 - b) Constitutes mainly of olefins
 - c) Does not contain asphalt
 - d) Does not contain aromatics
- Q.9 Sweetening of petroleum product means the removal of
- a) Wax
 - b) Water
 - c) Organic impurities
 - d) Sulphur & its compounds
- Q.10 The formula to find API gravity?
- a) $(141.5/\text{specific gravity} - 131.5)$
 - b) $Re = \rho DV/m$

- c) Both A & B
- d) None of above

SECTION-B

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

- Q.11 Write one use of petrol.
- Q.12 What is dehydration?
- Q.13 Write formula for specific gravity.
- Q.14 What is catalyst?
- Q.15 What is fire point?
- Q.16 Write formula of density.
- Q.17 Name any one type of reforming.
- Q.18 Define desulphurization?
- Q.19 What is viscosity?
- Q.20 Write full form of LPG?

SECTION-C

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

- Q.21 Difference between thermal cracking and catalytic cracking?
- Q.22 Explain the fluidized bed process.
- Q.23 Discuss about Indian petroleum refineries with location and capacity.
- Q.24 Explain Houry's fixed bed process.
- Q.25 Discuss about visbreaking with example.