

- Q.26 Differentiate between flash point and fire point.
 Q.27 Define dewaxing process and write its need in petroleum industry.
 Q.28 Discuss the reforming and its type in brief.
 Q.29 Discuss about stabilization of crude oil with neat sketch.
 Q.30 Write about cetane number and explain its significance.
 Q.31 Name any five products obtained from fractional distillation of crude oil with their boiling range.
 Q.32 Explain about cloud and pour point.
 Q.33 Explain solvent extraction process and its type in brief.
 Q.34 Write about fractional distillation with neat diagram.
 Q.35 Discuss about propane deasphalting process.

Section-D

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

- Q.36 What is catalytic reforming? Discuss any one catalytic reforming process in detail with neat & clean sketch.
 Q.37 Explain Dubb's thermal cracking process with neat and clean diagram.
 Q.38 Explain desulphurization of petroleum products also explain Doctor's Sweetening process with neat sketch.

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5 Sem., Branch : Chem. Subject : Petroleum Refining

Time : 3 Hrs. M.M. : 100

SECTION-A

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

- Q.1 Waxes present in petroleum products.
 a) Are not soluble in them
 b) Can be separated out by distillation
 c) Crystallize out at low temperature
 d) Decrease their viscosity
 Q.2 Which of the following has the highest viscosity of all (at a given temperature)?
 a) Fuel oil b) Naphtha
 c) Light diesel oil d) Petrol
 Q.3 Which of the following is used as a solvent in deasphalting of petroleum products.
 a) Propane b) Furfural
 c) Methyl ethyl ketone d) Liquid sulphur dioxide
 Q.4 Visebreaking process is used mainly for making:
 a) High cetane diesel b) Fuel oil
 c) High octane gasoline d) Smoke free kerosene

- Q.5 The proper arrangement of the petroleum fractions in order of their boiling points is-
- Lubricating oil > diesel > petrol > LPG
 - Petrol > Lubricating oil > Diesel > LPG
 - Lubricating oil > Petrol > diesel > LPG
 - Petrol > diesel > LPG > Lubricating oil
- Q.6 In petroleum refining, the process used for conversion of hydrocarbons to aromatics is -
- Hydrocarbons
 - Alkylating
 - Catalytic reforming
 - Catalytic cracking
- Q.7 Crude petroleum oil is a _____ fuel.
- Primary
 - Fossil
 - Secondary
 - Both A & B
- Q.8 Feed for reforming is generally -
- Reduced crude
 - Vacuum gas oil
 - Atmospheric gas oil
 - Naphtha or straight run gasoline
- Q.9 Octane number of gasoline is a measure of its-
- Ignition delay
 - Resistance to knock
 - Smoke point
 - Ignition temperature
- Q.10 Cracking is a _____ reaction.
- Exothermic
 - Endothermic
 - Photovoltaic
 - Both A & B

Section-B

- Note:** Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$
- Q.11 Write the name of any one crude oil pretreatment process.
- Q.12 Write the formula of API gravity.
- Q.13 What is smoke point?
- Q.14 Write two uses of kerosene.
- Q.15 Write formula for aromatic.
- Q.16 What is the boiling temperature of petrol?
- Q.17 Name the process used to separate out different hydrocarbon compounds from petroleum?
- Q.18 Define sweet crude oil.
- Q.19 Name any one polymerization process used in petroleum industry.
- Q.20 Write the name of catalyst used in fluidized catalytic cracking process.

Section-C

- Note:** Short answer type Question. Attempt any twelve questions out of fifteen Questions. $(12 \times 5 = 60)$
- Q.21 Write a short note on transportation of crude oil.
- Q.22 Write the location of any five petroleum refinery in India with their capacity.
- Q.23 Describe the refining of petroleum with a neat diagram.
- Q.24 Define cracking explain types of cracking in brief.
- Q.25 Explain Hot sulphuric acid polymerization process.