

[Time: 3 Hours]

[Total Marks: 80]

- N. B.:** (1) Question No. 1 is **Compulsory**.
(2) Attempt any **THREE** questions out of remaining **FIVE** questions.
(3) Figures to the **right** indicate **full** marks.
(4) Make **suitable** assumptions wherever **necessary**.

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1. Solve All [20]
(a) List and explain the classification of petroleum crude.
(b) Write short notes on petroleum waxes.
(c) Compare isomerization and reforming process.
(d) Define- 1) Flash Point 2) Cloud Point
2. (a) Give the Expression of UOP characterization factor and it's significance also write short note on ASTM Distillation. [10]
(b) Write a Short note on Delayed coking, and why the term delayed is use for this process. [10]
3. (a) Explain Duo-sol process in detail. [10]
(b) Write short notes on the following.-
(i) Air-blowing bitumen process for asphalt (ii) Polymer gasoline [10]
4. (a) Explain different arrangements of towers for crude oil refining [10]
(b) Explain the Visbreaking process in detail. [10]
5. (a) Describe the fluidized catalytic cracking (FCC) process with it's importance in Refinery. [10]
(b) Explain Merox Sweetening process for Gasoline [10]
6. (a) Explain Dehydration and desalting of crude in detail. [10]
(b) Explain Sulfuric acid alkylation process in detail and compare it with HF alkylation process [10]