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Roll No

CM-702(C)-CBGS

B.Tech., VII Semester

Examination, December 2020

Choice Based Grading System (CBGS)

Petroleum Refining Engineering

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Draw neat sketch and assume suitable data wherever you required.
1. a) Write a brief note on Biogenetic origin and Abiogenetic origin of petroleum.
b) What is the influence of octane number and cetane number on petroleum fuels?
 2. a) Why is crude oil pretreatment needed? What are the five basic refining processes?
b) What is atmospheric distillation column? Why is steam directly injected in atmospheric distillation?
 3. a) Explain with sketches : Reforming.
b) Describe hydrocracking with neat diagrams.
 4. a) Describe thermal cracking process. Differentiate between thermal cracking and catalytic cracking on the basis of temperature, catalyst used and advantages.
b) What is alkylation? Write down reactions involved in it.

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5. a) Why it is called delayed coking?
b) Explain commercially available gas sweetening technology to treat acid gases.

6. a) What is dewaxing of oil? Why is dewaxing necessary?
b) Why is desulphurization important? How can crude oil reduce sulfur?

7. a) Explain the Characteristics of LPG. Is LPG convenient for environment?
b) Explain the use of the Pressure Swing Adsorption (PSA) process for the recovery of high purity hydrogen.

8. a) Explain how the Crude oil pollution, arising from exploration and processing operations, is a common environmental challenge.
b) What are the uses of petroleum products? How can we conserve petroleum?
