B.Tech. SEM -VII (Chemical 2014 Course (CBCS) : SUMMER - 2019

SUBJECT : ELECTIVE – III : PETROLEUM REFINERY ENGINEERING

Day : Thursday
Date : 09/05/2019

S-2019-2782

Time : 02.30 PM TO 05.30 PM
Max. Marks : 60

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagram **WHEREVER** necessary.
4) Assume suitable data, if necessary.

Q. 1 Illustrate how crude oil is classified in different ways. **(10)**

OR

Elaborate on ASTM nomenclature (ASTM) test numbers and their meaning. **(10)**

Q. 2 Draw flow diagram of atmospheric distillation and explain the process of distillation. **(10)**

OR

Draw vacuum distillation and explain the process of vacuum distillation. **(10)**

Q. 3 Draw flow diagram of catalytic cracking and explain the catalytic cracking process. **(10)**

OR

a) Illustrate delayed coking **(05)**

b) Give the effect of different parameters on catalyst used for catalytic cracking. **(05)**

Q. 4 a) Differentiate between hydro treating and hydro cracking reactions. **(05)**

b) Give details of reforming catalyst. **(05)**

OR

Draw flow diagram of catalytic reforming and explain the process. **(10)**

Q. 5 Discuss Isomerization process with flow diagram **(10)**

OR

Discuss Alkylation process with flow diagram **(10)**

Q. 6 Illustrate environmental issues related to refinery operations. **(10)**

OR

Discuss the different methods used for treatment of waste water from petroleum industry. **(10)**

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