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**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
MID TERM EXAMINATION - OCT 2023**

Semester : Semester VII - 2020

Course Code : PET2011

Course Name : Sem VII - PET2011 - Oil and Gas Downstream Operations

Program : B. TECH

Date : 2-NOV-2023

Time : 11:30AM - 1:00PM

Max Marks : 60

Weightage : 30%

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Question paper consists of 3 parts.

(iii) Scientific and non-programmable calculator are permitted.

(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS

(5 X 2 = 10M)

1. Mention the types of crude oil based on its physical properties.
(CO1) [Knowledge]
2. State different units present in a petroleum refinery.
(CO1) [Knowledge]
3. List some important variable parameters used in petrochemical industries.
(CO2) [Knowledge]
4. State the function of separation unit of the petroleum refinery.
(CO2) [Knowledge]
5. Define complex hydrocarbon.
(CO2) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS

(2 X 15 = 30M)

6. "Steam cracker units are facilities in which a feedstock as Naptha". Based on the statement illustrate the production of Naphtha by steam cracking unit. Also, describe the application of naphtha.
(CO1) [Comprehension]
7. "Heber's Process is one of the best processes for the production of NH₃"- Explain the statement with proper reaction.
(CO2) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION

(1 X 20 = 20M)

8. Urea has a major use in the agricultural industry which is derived from the petrochemical industry. As an engineer explain a plan to establish a urea production plant inside a petrochemical industry in which your raw material is NH_3 . Assume your raw material is a waste product of that petrochemical industry.

(CO₂) [Application]