Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
MID TERM EXAMINATION - APR 2023

Semester : Semester IV - 2021

Course Code : PET2014

Course Name : Sem IV - PET2014 - Geophysical Methods for Oil and Gas Exploration

Program : PET

Date : 13-APR-2023

Time : 2:00PM - 3:30PM

Max Marks : 50

Weightage : 25%

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. List the classes of kerogen.

(CO1) [Knowledge]

2. State the applications of microfossil in hydrocarbon exploration.

(CO1) [Knowledge]

3. Describe hydrocarbon exploration.

(CO1) [Knowledge]

4. Define the process of diffusion and effusion.

(CO2) [Knowledge]

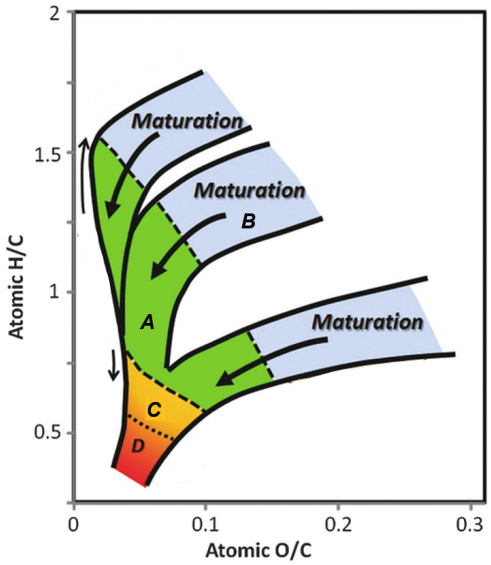
5. List out the mechanisms of hydrocarbon transport from subsurface to near surface sediments.

(CO2) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS **(2 X 10 = 20M)**

6. Based on the given figure, answer the following questions:



a. Identify the diagram and state its applications.
b. Identify and describe the process A.
c. Identify and describe the process B.
d. Identify and describe the process D.
e. List the main fluid evolved during the process A, B , C and D.

(CO1) [Comprehension]

7. "*Surface geochemical methods deals with the search for chemically identifiable surface or near-surface occurrences of hydrocarbons*." Based on the statement, summaries the benefits, limitations and uncertainties of the methods.

(CO2) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION **(1 X 20 = 20M)**

8. "*The indirect indicators of hydrocarbon migration are reaction products produced by the oxidation of thermogenic hydrocarbons, or other manifestations which are consequences of the thermogenic hydrocarbon migration*." Based on the given statement, classify and discuss the manifestations which happen as the consequences of the thermogenic hydrocarbon migration.

(CO2) [Application]