

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2018

Course/Program: B.Tech (Ape-Up)
Subject: Sedimentary & Petroleum Geology
Code: EASC 206
Time: 03 hrs.
No. of pages: 02

Semester: IV

Max. Marks: 100

Instructions: Write comprehensive answers and illustrate with sketch if necessary.

SECTION A [Attempt all] (5x4=20)

S. No.	Define the followings	Marks	CO
Q 1. a	Hydrogen Index	4	CO5
Q 1. b	Pyrolysis	4	CO5
Q 1. c	Turbidity current	4	CO2
Q 1. d	Catagenesis	4	CO6
Q 1. e	Type-II Kerogen	4	CO5

SECTION B [Attempt Q2, 3,4 & any one of 5] (10x4=40)

Q 2.	Why for hydrocarbon source rock maturation Tmax and Oil & Gas window do not coincide?	10	CO5
Q 3.	Write down the supplementary evidences of organic theory of origin of hydrocarbon.	10	CO5
Q 4.	“A porous rock have to be highly permeable”- Justify the statement with an example.	10	CO1
Q 5.	Describe the role of pressure in the process of crude oil migration.	10	CO6

OR

	Describe the process by which in the junction of river and sea/ocean most of the dissolved and suspended load is discharged leading to the formation of delta.	10	CO3
--	--	----	-----

SECTION-C [Attempt Q6 and any one of 7] (20x2=40)

Q 6.	Write a short note along with proper sketches about soft sediment deformation structure. Describe the process of tectonic subsidence, which may eventually lead to a sedimentary basin formation.	10+10	CO1 CO4
Q 7.	Classify different types of kerogen according to H/C and O/C ratio and expected production outcome in terms of single or multi-phase fluid upon maturation. Describe the process of crude oil/natural gas generation from kerogen.	10+10	CO5 CO6

OR

	Write a short note on petroleum trap rock evaluation. According to the definition of API gravity of crude oil what kind of capillarity behavior is expected in heavy and	10+10	CO5 CO6
--	--	-------	------------

	light crude oil?		
--	------------------	--	--