Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination December 2020

Program: B-Tech APE –GAS **Semester: III**
Course: Petroleum Exploration **Time: 180 minute (3 hour)**
Course Code: PEGS-3013 **Max. Marks: 100**
Number of pages: 03
Note: online submission

SECTION A

1. **Each questions carry 5 Marks** **6 X 5 = 30 M**
2. **Type answer for all the questions in the answer sheet using given space.**
3. **The maximum word limit is 30 or 3 lines.**

Q.No	Question	CO
1	How you will distinguish between Radiogenic and Geogenic Helium?	CO2
2.	Define the terms Reef and Pinchout	CO1
3	Write a note on following terms in context with Petroleum exploration. i) Trap ii) Kerogen.	CO1
4	Fill in the blanks with suitable answer: i) ……. is a recording of the Earth's response to seismic energy passing from the source, through subsurface layers, and back to the receiver ii) A well-defined negative gravity anomaly centered over and the circular gravity contours reflect the circular outline in …….. Structure. iii) ……. is an area of a three dimensional subdivision of a seismic survey. iv) The processed seismic trace on a common midpoint that have been added together but has undergone only cursory velocity analysis so the normal-move out correction is a first attempt and no static corrections are made before is called…… v) A geometrical arrangement of seismic receivers (geophones) with signals recorded by one channel is known as…….	CO5
5	What are the common sources of radiogenic heat for shallow crustal level?	CO4

6	TRUE/FALSE (Choose correct answer and type the answer) i) An unusual occurrence of hydrocarbon in which molecules of methane are trapped in ice molecules is called hydrates. ii) The process of changing volume as stress is applied to a body is called dilatation. iii) The resolution of MT surveys is not limited by the diffusive nature of EM propagation in the earth. iv) The MT soundings over the area of target, providing slices of subsurface Resistivity data. v) The flow of charged particles in ionosphere zones are cannot vary the frequency of MT survey.	CO3

SECTION B

1. **Each questions carry 10 Marks** **5 X 10 = 50 M**
2. **Scan and upload your answer**
3. **The maximum word limit is 500 or one page**

Q.No	Question	CO
7	Write a short note on how microbiological method can be helpful in hydrocarbon exploration? **OR** Define trap and discuss in brief classification of trap.	CO5
8.	What is the importance in fixing the datum for gravity geophysical survey?	CO2
9	What are static corrections in reflection seismic geophysical survey?	CO6
10	Explain in brief the working principle, merits and demerits of Shipborne and Bell gravimeter in gravity survey.	CO4
11	Discus in brief the refraction seismic survey and their significance in petroleum exploration.	CO6

SECTION C

1. **Answer either question a or b** **1 X 20 = 20 M**
2. **Scan and upload your answer**

Q.No	Question	CO
12	a) What are different temporal variations of magnetic observations and how they are accommodated in magnetic geophysical survey? **OR** b) Discus in brief the role following terms in Magnetic geophysical survey i) Magnetic flux, ii) Magnetic permeability, iii) Magnetic susceptibility and iv) Magnetic variation.	CO4