

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
END SEMESTER EXAMINATION, DECEMBER 2018

Programme : M.TECH PE

Course Name : Drilling Engineering

Course Code : PEAU 7001

Nos of Page(s) : 01

Semester : I

Time : 03 hrs.

Max. Marks: 100

Instructions: All questions are Compulsory

SECTION A

S. No.		Marks	CO
Q 1	List the personnel involved in preparation of GTO? Identify parameters from GTO?	02+02	CO1
Q 2	Explain how “Differential Pipe Sticking” happen?	04	CO2
Q 3	Discuss role of cement additives in Drilling Operations?	04	CO3
Q 4	Draw the flow diagram of “Mud Circulation System” and label the different components?	04	CO4
Q 5	What are the differences between Soft shut in and Hard shut in procedures?	04	CO3

SECTION B

Q 6	List all the properties of drilling fluid and explain the importance of any three properties?	03+05	CO2
Q 7	Discuss hoisting system on a conventional land drilling rig? Explain functions of each of the components?	04+04	CO3
Q 8	i. Identify warning signals that a driller should observe during a gas influx? ii. Discuss the functions of any two components used in BHA? iii. Define Hydrostatic Pressure and Hydraulic Pressure?	03+03 +02	CO2
Q 9	i. Summarize different considerations needed while planning a directional well? ii. List main factors that will influence the pressure loss during fluid circulation?	04+04	CO5
Q 10	Explain different types of casings and list out the functions.	08	CO2

SECTION-C

Q 11	i. Explain the importance of “Trip Tank”? ii. Identify different processes involved in drilling a vertical well? iii. Differentiate types of Well Completions?	05+10 +05	CO2 & C04
Q 12	i. Discuss the killing procedure followed in “Driller’s Method”? ii. Define KICK and explain the importance of L.O.T?	10+10	CO5