

Name:
Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec 2019

Course: Offshore Drilling and Production Operations
Program: B.Tech-APEUP
Course Code: PTEG411

Semester: VII
Time 03 hrs.
Max. Marks: 100

Instructions: All questions are compulsory.

SECTION A

S. No.		Marks	CO
Q 1	Write a short definition of Coriolis force. Draw figures to show the movement of wind around high and low pressure due to Coriolis force in the northern hemisphere.	4	CO1
Q 2	List the five categories of health hazard found in offshore oil and gas industry. Write a brief note about each of them.	4	CO5
Q 3	Describe in brief, lag time, lag depth, cycle time and surface to bottom time while oil and gas drilling. Describe how each of them is related to well depth and pump rate.	4	CO3
Q 4	While drilling from an offshore rig, name three places of importance where utmost safety is required. Describe in brief safety hazards caused due to unsafe activity in these areas?	4	CO2
Q 5	List four different types of gases found during oil and gas drilling. Write a brief note about each of them.	4	CO4

SECTION B

Q 6	Name and describe six method applied in dehydrating crude petroleum emulsions?	10	CO4
Q 7	With suitable diagram, describe in detail, five type of clouds found in earth's atmosphere? <p style="text-align: center;">OR</p> List and explain in detail the four factors, which determine the wave height?	10	CO1
Q8	Explain in detail different components of oil and gas separator? Describe function of each of these components.	10	CO5
Q 9	What are essential components of a solid desiccant gas dehydration system. Explain the same with suitable flow diagram.	10	CO3

SECTION-C

Q10	<p>Describe in detail sequence of operations done during drilling of offshore wells from a floating unit. Illustrate the same with a hypothetical well program.</p> <p style="text-align: center;">OR</p> <p>List seven types of environment pollution related challenges in offshore operations. Give suitable reasons and how they may addressed?</p>	20	CO5 CO6
Q11	<p>Describe in detail, different type of functions performed by ROV in the offshore oil and gas industry?</p> <p style="text-align: center;">OR</p> <p>What are the components of ROV inspection of an offset Drilling platform? Explain role of drone technologies in enhancing quality of inspection of land rigs.</p>	20	CO4