UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2021

Course: Well Intervention and Stimulation Techniques   **Semester: II**
Program: M Tech Petroleum Engineering   **Time 03 hrs.**
Course Code: PEAU 7008   **Max. Marks: 100**

 Instructions: All questions are compulsory. There is an internal choice in last question.

SECTION A
Each question carries 5 marks. Attempt all questions. Write brief answers.

S. No.		Marks	CO
Q 1	Arrange below mentioned five metals in sequence of least corrosive to most corrosive in natural environment? Zinc, Iron, Aluminum, Tin, Gold	5	CO1
Q 2	Name five applications of squeeze cement job done in oil and gas wells?	5	CO2
Q 3	List five reservoir related problems encountered in a producing well which lead to less production over prolonged period of time?	5	CO3
Q 4	Explain in short the difference between matrix and fracture acidization?	5	CO3
Q5	List five components of a workover rig?	5	CO2
Q 6	List five types of mechanical jobs performed on a producing problematic well by a well intervention engineer?	5	CO3

SECTION B
Attempt all questions. Write short answers of approx. 100 words. Each question carries 10 marks.

Q 7	Describe in brief various techniques used to control sand production from an oil well?	10	CO4
Q 8	Describe the difference between high and low pressure cement squeeze jobs performed in oil and gas wells?	10	CO2
Q9	What is hydraulic fracturing? Why is it done? Explain in brief the role of proppant in hydraulic fracturing?	10	CO5
Q10	Explain the physical and chemical characteristics of paraffin and asphaltene?	10	CO3
Q 11	Describe in brief various techniques used to prevent corrosion in oil and gas industry?	10	CO3

SECTION-C

12	Describe in detail what is coiled tubing unit and what are its main components? Explain in detail its uses in workover operations? **OR**	20	CO5

	Describe in detail what is slick line unit. Explain what are its main components? List the name and uses of five types of tools used with slick line?		