


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, May 2020			
Course: Defect Assessment & Maintenance in Pipeline – I Program: M. Tech. PLE Course code: CHPL 7006		Semester: II Time : As per instruction Max. Marks: 100	
Instructions: solve all questions			
SECTION A			
Q 1	Corrosion rate accelerates for buried pipelines; indicate the reasons responsible for increase in corrosion. Explain the severity of each effect with its value.	10	CO 3
Q 2	Draw scrapper launching & receiving barrel. Explain the difference in two process in tabular form.	10	CO 1
Q 3	How is DCVG survey different form CIPS survey? At what stage DCVG survey is to be undertaken.	10	CO3
Q4	Answer the following: a) Explain how pipeline optimization is carried out while designing of the pipeline. b) Describe the mechanism of corrosion and essential conditions for corrosion to take place.	5 5	CO4
SECTION B			
Q 5	Write down ten types of tests/ analysis required for integrity assessment of cross-country pipeline as per OISD requirement.	15	CO1
Q 6	What are the various types of surveys carried out to ascertain the health of the pipelines? Describe the various surveys carried out to assess the coating defects. How each survey differs from other method? Indicate the precaution required for completion of surveys effectively.	15	CO2
Q7	a) It is said that corrosion occur due to loss/ reduction of material thickness. Mention various type of corrossions, which can be observed. Explain crevice corrosion.	8+7	CO3

	b) What is the need for cathodic isolation of pipeline? Describe various types of isolation methods used for isolation of pipeline.		
Q8	What are the various factors responsible for failure of pipelines? How the assessment for repair / replacement of pipeline is carried out? Explain risk based inspection of pipeline & draw the chart.	15	CO5