

Name:

Enrolment No:



## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

Online End Semester Examination, Dec. 2020

Programme Name: M. Tech Pipeline Engineering

Semester : III

Course Name : Equipment and machinery maintenance

Time : 03 hrs

Course Code : MECH7003

Max. Marks : 100

Nos. of page(s) :2

Instructions: Attempt all questions

### SECTION A

1. Each question carries 5 marks.

S. No.		CO
Q1.	Name the five maintenance types -----, -----,-----,-----,----- -----	CO1
Q2.	List five fire fighting equipments -----,-----,-----,-----,----- -----	CO4
Q3.	Multiple choice questions. Select the correct answer  1. The maintenance activity consists of the following action(s) a) Repair of the component b) Replace of the component c) Service of the component d) All of the above 2. Scheduled maintenance is _____ between breakdown maintenance and the preventive maintenance a) Bridge b) Join c) In d) Compromise 3. History card of the equipment contains following record a) The rate at which different components wear off b) The way equipment behaves c) Total down time of the equipment d) All of the above 4. The objective of Total productive maintenance is/are a) Increase in productivity b) Zero down time c) Less idle time	CO1

	<p>d) None of the above</p> <p>5. A systematic approach for maintenance is</p> <p>a) Problem– Diagnosis – Cause – Rectification</p> <p>b) Problem– Diagnosis – Measure – Rectification</p> <p>c) Problem – Cause – Diagnosis – Rectification</p> <p>d) Problem – Measure – Diagnosis – Rectification</p>	
Q4.	Enlist different types of the storage tanks used for petroleum products.	<b>CO2</b>
Q5.	Write the five failure analysis or defect analysis approaches.	<b>CO2</b>
Q6.	What are the basic functions of the maintenance?	<b>CO1</b>
<b>SECTION B</b>		
<p><b>1. All questions will carry 10 marks</b></p> <p><b>2. Write short answer</b></p>		
Q1.	Describe the transformer and its maintenance procedure.	<b>CO4</b>
Q2.	Explain the tank farm. Write the maintenance activity for the floating roof storage tanks.	<b>CO2</b>
Q3.	Elaborate maintenance procedure of the gate valve and globe valve used in the petroleum pipeline.	<b>CO3</b>
Q4.	Describe the cooling system of the A.C. motor.	<b>CO4</b>
Q5.	Explain the maintenance of the bourdon tube pressure gauge.	<b>CO3</b>
<b>SECTION C</b>		
<p><b>1. Each Question carries 20 Marks.</b></p> <p><b>2. Instruction: Write long answer.</b></p>		
Q1.	<p>Describe single point mooring. Write the methods for maintenance of the single point mooring.</p> <p style="text-align: center;">OR</p> <p>Elaborate maintenance activity of the submarine pipeline.</p>	<b>CO5</b>