

Name:

Enrolment No:



UNIVERSITY WITH A PURPOSE

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**Online End Sem. Examination, May 2021**

**Course: Storage and Transportation of Oil & Gas**

**Programme: B.Tech (APE Up Stream)**

**Course Code: CHCE3036**

**Semester: VI**

**Time: 03 hrs.**

**Max. Marks: 100**

**SECTION A**

**1. Each Question will carry 5 Marks**

**2. Instruction: Complete the statement / Select the correct answer(s)**

Sl. No.	Question	CO
Q 1	(A) On platforms without a pipeline, oil is stored in (i.) Salt Deposits (ii.) Caverns (iii.) Onboard Storage Tanks (iv.) All (B) The oil is stored in storage cells around the shafts on (i.) Concrete Platforms (ii.) Floating Tank (iii.) Both (iv.) None (C) Which of the following is important for balancing the buoyancy when oil volume varies (i.) Storage Tank (ii.) Ballast Handling (iii.) Fixed Roof Tanks (iv.) Rock Caves	CO1
Q 2	(A) The distance between pumping or compressor stations is determined by (i.) Pump Capacity (ii.) Viscosity of The Product (iii.) Size of The Pipeline (iv.) All (B) Which of the following is important to control the system to maintain a constant movement of oil within the pipeline (i.) Pumping Pressures (ii.) Flow Rate (iii.) Both (iv.) None	CO1
Q 3	(A) The API (American Petroleum Institute) of a particular crude is merely a measure of (i.) Specific Gravity (ii.) Viscosity	CO1

	<ul style="list-style-type: none"> <li>(iii.) Surface Tension</li> <li>(iv.) All</li> </ul> <p>(B) The lower the API is true for</p> <ul style="list-style-type: none"> <li>(i.) Lighter and Thinner Crude</li> <li>(ii.) Heavier and Thicker Crude</li> <li>(iii.) No Relation with Thickness of Crude</li> <li>(iv.) None</li> </ul> <p>(D) The meter used for gas metering is</p> <ul style="list-style-type: none"> <li>(i.) Orifice Meters</li> <li>(ii.) Ultrasonic Meters</li> <li>(iii.) Both</li> <li>(iv.) None</li> </ul>	
Q 4	<p>(B) The pipeline used to collect oil and gas from several locations for delivery to central accumulating points, such as from field crude oil tanks and gas plants to marine docks</p> <ul style="list-style-type: none"> <li>(i.) Flow Lines</li> <li>(ii.) Petroleum Product Trunk Pipelines</li> <li>(iii.) Gathering Lines</li> <li>(iv.) Crude Trunk Pipelines</li> </ul> <p>(D) The typical range of API gravities for crude oil is</p> <ul style="list-style-type: none"> <li>(i.) 7 to 52</li> <li>(ii.) 3 to 25</li> <li>(iii.) 50 to 129</li> <li>(iv.) 120 to 225</li> </ul> <p>(E) Which of the following is considered as the best, lighter crude in term of API</p> <ul style="list-style-type: none"> <li>(i.) 46 to 50</li> <li>(ii.) 40 to 45</li> <li>(iii.) above 46</li> <li>(iv.) above 50</li> </ul>	CO2
Q 5	<p>(A) The natural gas, once separated from crude oil is commonly exists in mixtures with other hydrocarbons such as</p> <ul style="list-style-type: none"> <li>(i.) Ethane</li> <li>(ii.) Propane</li> <li>(iii.) Butane</li> <li>(iv.) All</li> </ul> <p>(B) Which of the following is the principal content of raw natural gas</p> <ul style="list-style-type: none"> <li>(i.) Hydrogen Sulfide</li> <li>(ii.) Nitrogen</li> <li>(iii.) Water Vapor</li> <li>(iv.) All</li> </ul>	CO2
Q 6	<p>(B) On platforms without a pipeline, oil is stored in onboard storage tanks to be transported by shuttle tanker</p> <ul style="list-style-type: none"> <li>(i.) True</li> </ul>	CO2

	(ii.) False (E) When gas is exported, many gas trains include additional equipment for further gas processing to remove unwanted components such as hydrogen sulfide and carbon dioxide (i.) True (ii.) False	
<b>SECTION B</b>		
<b>1. Each question will carry 10 marks</b>		
<b>2. Instruction: Write short / brief notes</b>		
Q 7	Write a detailed notes on pipeline and their types OR Write detailed notes on Tank truck and their loading as well as unloading process.	<b>CO1</b>
Q 8	Enumerate the different types of storage tanks.	<b>CO2</b>
Q 9	Discuss the different types of separators.	<b>CO3</b>
Q 10	Discuss the following types of the processed raw gas (i) Natural gas (ii) Liquefied petroleum gas (LPG) (iii) Liquefied natural gas (LNG) (iv) Compressed natural gas (CNG)	<b>CO3</b>
Q 11	Describe the different types of truck used for transportation of oil.	<b>CO3</b>
<b>SECTION-C</b>		
<b>1. Each Question carries 20 Marks.</b>		
<b>2. Instruction: Write long answer.</b>		
Q 12	(A) Discuss the components involved in the flow of the crude oil from reservoir to refinery. OR (B) Discuss the components of Wellhead and the Christmas Tree.	<b>CO4</b>