


<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**End Semester Examination, May 2023**

**Course:** MBA OG

**Semester: II**

**Program:** Understanding Natural Gas Business

**Time:** 03 hrs.

**Course Code:** OGOG 7011

**Max. Marks:100**

**Instructions:**

**SECTION A**  
**10Qx2M=20Marks**

S. No.		Marks	CO
Q 1	Fill in the blanks: 1. 1.0 tonne of LNG is vaporized and expands to..... M3 of gas at atmospheric conditions. 2. Gas conversion factor from standard M <sup>3</sup> to SCF is.....	2	CO1
Q 2	Define the term <i>Gas Oil Ratio (GOR)</i> .....	2	CO1
Q 3	In the state of Texas, the statutory definition of a gas well is one where the GOR is greater than ..... ft3/bbl or... ..Kcf/bbl	2	CO1
Q 4	What are the non-hydrocarbon contents in natural gas feed?	2	CO1
Q 5	Name the three gas fields in India and in which basins they are located?	2	CO1
Q 6	Define the terms <i>Cricondentherm</i> and <i>Cricondenbar</i> as shown on the PVT diagram	2	CO1
Q 7	How mercury is removed from Natural Gas feed?	2	CO1
Q 8	Free gas and total gas content of Indian shales are.....compared to North American Shales.	2	CO1
Q 9	Where is Atlantic Pacific LNG located and who owns this LNG project?	2	CO1
Q 10	What are the upstream gross margins of conventional natural gas vis-a-vas CBM?	2	CO1

**SECTION B**  
**4Qx5M= 20 Marks**

Q 1	Describe the " <i>Retrograde-Condensate-Gas Phase Behavior</i> "	5	CO2
Q 2	In what ways the CBM projects are different from other natural gas projects	5	CO2
Q 3	Describe the <i>Sabine pipeline LLC and its affiliates</i>	5	CO2
Q 4	What are <i>Gas Hydrates</i> and describe <i>gas hydrate stability zone</i>	5	CO2

**SECTION-C**  
**3Qx10M=30 Marks**

Q 1	What are the physical and logistical attributes of a natural gas hub?. Describe the three major gas hubs and the factors for their becoming pricing benchmark for natural gas trade.	<b>10</b>	<b>CO3</b>
Q 2	Describe the <i>Syngas market</i> . What are the major steps in GTL (gas to Liquid) process and the range of products obtained from Syngas?	<b>10</b>	<b>CO3</b>
Q 3	Describe the APM and non-APM gas pricing structures. What are the main recommendations of <i>Rangarajan committee</i> on domestic gas pricing?	<b>10</b>	<b>CO3</b>

**SECTION-D**  
**2Qx15M= 30 Marks**

Q 1	Describe the case dispute between <i>IGL versus PNGRB</i> on the issue of CGD license for Ghaziabad GA. Explain the supreme court ruling in this case and the Significance of section 16 of PNGRB act.	<b>15</b>	<b>CO4</b>
Q 2	<p>Attempt any one of the two:</p> <p>a. Reference to HBR case study “<i>Gas Natural BAN’s strategy for low income sectors</i>”, describe the followings,</p> <ol style="list-style-type: none"> <li>1. <i>Case introduction and background</i></li> <li>2. <i>What elements in gas for everyone may be construed as part of a LIS-oriented strategy?</i></li> <li>3. <i>What major challenges the company face throughout this process?</i></li> </ol> <p>a. Analyze <b>Project Structure, Cost, and Financing of LNG projects</b>. Compare the project cost components for two LNG projects: Algeria II and Pac Indonesia”</p>	<b>15</b>	<b>CO4</b>