Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: Operations Management **Semester: 3**
Program: MBA Aviation/Oil and Gas Management **Time : 03 hrs.**
Course Code: LSCM 7001 **Max. Marks: 100**

Instructions: Students may use their own calculator for section D.

SECTION A

Define the terms in one or two sentences 10Qx2M=20Marks

S. No.		Marks	CO
Q 1	JIT	**2**	**CO1**
Q2	Lean Management	**2**	**CO1**
Q3	ERP	**2**	**CO1**
Q4	Manufacturing resources planning	**2**	**CO1**
Q5	Pipeline inventory	**2**	**CO1**
Q6	Long-term capacity plans deal with: A) investments in new facilities. B) workforce size. C) inventories. D) overtime budgets.	**2**	**CO1**
Q7	When a process fails to satisfy a customer: A) it is quite often the customer's fault. B) it is considered a defect C) it is time to reengineer the process. D) it is usually half the customer's fault and half the company's fault.	**2**	**CO1**
Q8	Which of these statements about processes is NOT true? A) A process can have its own set of objectives. B) A process can involve work flow that cuts across departmental boundaries. C) A process can require resources from several departments. D) A process can exist without customers.	**2**	**CO1**
Q9	Professor Willis noted that the popularity of his office hours mysteriously rose in the middle and the end of each semester, falling off to virtually no visitors throughout the rest of the year. The demand pattern at work is: A) cyclical. B) random. C) seasonal. D) trend.	**2**	**CO1**

<table>
<tr><td>Q10</td><td>Which of the following generates pressure to increase inventories?
A) inventory holding costs
B) ordering costs
C) storage and handling costs
D) taxes and insurance</td><td>2</td><td>CO1</td></tr>
<tr><td colspan="4">SECTION B
Answer the below question in short 4Qx5M= 20 Marks</td></tr>
<tr><td>Q 11</td><td>Define Operations Strategy and its need in present scenario.</td><td>5</td><td>CO2</td></tr>
<tr><td>Q 12</td><td>What is TQM and its relevance in evolving as market leader.</td><td>5</td><td>CO2</td></tr>
<tr><td>Q 13</td><td>Discuss about any three types of Inventory Control?</td><td>5</td><td>CO2</td></tr>
<tr><td>Q 14</td><td>Discuss the need for Lean management and the philosophy behind the same.</td><td>5</td><td>CO3</td></tr>
<tr><td colspan="4">SECTION-C
3Qx10M=30 Marks</td></tr>
<tr><td>Q 15</td><td>Analyse and explain MAD and MAPE in forecasting.</td><td>10</td><td>CO3</td></tr>
<tr><td>Q16</td><td>Explain in detail about various quality management tools.</td><td>10</td><td>CO5</td></tr>
<tr><td>Q17</td><td>Discuss about various factors affecting facility location?</td><td>10</td><td>CO5</td></tr>
<tr><td colspan="4">SECTION-D
Solve the below question and explain in proper steps 2Qx15M= 30 Marks</td></tr>
<tr><td>Q18</td><td>Explain about any four plant layout models?</td><td>15</td><td>CO4</td></tr>
<tr><td>Q 19</td><td>The new Health-care facility is targeted to serve seven census tracts in Delhi. The table given below shows the coordinates for the centre of each census tract, along with the projected populations, measured in thousands. Customers will travel from the seven census tract centres to the new facility when they need health-care. Two locations being considered for the new facility are at (5.5, 4.5) and (7, 2), which are the centres of census tracts C and F. Details of seven census tract centres, co-ordinate distances along with the population for each centre are given below. If we use the population as the loads and use rectilinear distance, which location is better in terms of its total load-distance score?
<table>
<tr><th>Sl. No.</th><th>Census tract</th><th>(x, y)</th><th>Population (l)</th></tr>
<tr><td>1</td><td>A</td><td>(2.5, 4.5)</td><td>2</td></tr>
<tr><td>2</td><td>B</td><td>(2.5, 2.5)</td><td>5</td></tr>
<tr><td>3</td><td>C</td><td>(5.5, 4.5)</td><td>10</td></tr>
<tr><td>4</td><td>D</td><td>(5, 2)</td><td>7</td></tr>
<tr><td>5</td><td>E</td><td>(8, 5)</td><td>10</td></tr>
<tr><td>6</td><td>F</td><td>(7, 2)</td><td>20</td></tr>
<tr><td>7</td><td>G</td><td>(9, 2.5)</td><td>14</td></tr>
</table></td><td>15</td><td>CO4</td></tr>
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