

Name:  
Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**Online End Semester Examination, Dec 2020**

**Course:** Operations Management

**Semester:** III

**Program:** BBA (Analytics & Bus. Data/Family Business & Entrepreneurship)

**Time:** 180 Minutes

**Course Code:** LSCM 1002

**Max. Marks:** 100

Section-A	Answer all <u>six</u> questions. Each question carries <u>five</u> marks [30 Marks]	COs
Q1	Community infrastructure is treated as a _____ factor in facility location planning. [Select the right answer.]	CO1
A	controllable	
B	uncontrollable	
C	specific	
Q2	The concept of quality control charts was coined by _____. [Select right answer.]	CO1
A	F W Taylor	
B	Henry Gantt	
C	W A Shewart	
D	W E Deming	
Q3	MRP in operations management stands for _____. [Fill in the blank.]	CO1
Q4	SQC stands for _____. [Fill in the blank.]	CO1
Q5	_____ is also known as corrective maintenance. [Select right answer.]	CO1
A	Preventive maintenance	
B	Predictive Maintenance	
C	Breakdown Maintenance	
Q6	ROL stands for _____. [Fill in the blank.]	CO1
<b>Section-B</b>	<b>Answer all <u>five</u> questions. Each question carries <u>ten</u> marks [50 Marks]</b>	<b>COs</b>
Q7	Write the systematic procedure of designing a process layout.	CO1
Q8	Explain the types of layouts suitable for different production systems.	CO1

Q9	Explain the significance of <i>Forward Scheduling</i> and <i>Backward Scheduling</i> in production planning and operations management.	CO2																																												
Q10	<p>Had you been the sales analyst, and you would have used the single exponential smoothing method, what would be the forecasting values for the year 2020 for your company? Show all calculations. The actual sales figures are given in the table –</p> <table border="1"> <thead> <tr> <th>Month</th> <th>Actual Sales</th> <th>Forecasting Values</th> <th>Other information</th> </tr> </thead> <tbody> <tr> <td>Jan' 2020</td> <td>135</td> <td>?</td> <td rowspan="3">Quarter-1 Assume forecast value for Jan-20 to be 135. <math>\alpha</math> value for this period is 0.3</td> </tr> <tr> <td>Feb'20</td> <td>134</td> <td>?</td> </tr> <tr> <td>Mar'20</td> <td>136</td> <td>?</td> </tr> <tr> <td>Apr'20</td> <td>138</td> <td>?</td> <td rowspan="3">Quarter-2 <math>\alpha</math> value for this period is 0.4</td> </tr> <tr> <td>May'20</td> <td>136</td> <td>?</td> </tr> <tr> <td>Jun'20</td> <td>136</td> <td>?</td> </tr> <tr> <td>Jul'20</td> <td>137</td> <td>?</td> <td rowspan="3">Quarter-3 <math>\alpha</math> value for this period is 0.4</td> </tr> <tr> <td>Aug'20</td> <td>137</td> <td>?</td> </tr> <tr> <td>Sep'20</td> <td>141</td> <td>?</td> </tr> <tr> <td>Oct'20</td> <td>124</td> <td>?</td> <td rowspan="3">Quarter-4 <math>\alpha</math> value for this period is 0.3</td> </tr> <tr> <td>Nov'20</td> <td>129</td> <td>?</td> </tr> <tr> <td>Dec'20</td> <td>137</td> <td>?</td> </tr> </tbody> </table>	Month	Actual Sales	Forecasting Values	Other information	Jan' 2020	135	?	Quarter-1 Assume forecast value for Jan-20 to be 135. $\alpha$ value for this period is 0.3	Feb'20	134	?	Mar'20	136	?	Apr'20	138	?	Quarter-2 $\alpha$ value for this period is 0.4	May'20	136	?	Jun'20	136	?	Jul'20	137	?	Quarter-3 $\alpha$ value for this period is 0.4	Aug'20	137	?	Sep'20	141	?	Oct'20	124	?	Quarter-4 $\alpha$ value for this period is 0.3	Nov'20	129	?	Dec'20	137	?	CO2
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Q11	The observed time of an operation task is 15 minutes. The work being done in the morning shift, operators exhibit a performance rating of 120%. But, the critical nature of the process demands an allowance of 8% and the operators need badly a personal allowance of 3%. Compute the <i>Normal Time</i> and <i>Standard Time</i> to perform this operation task.	CO3																																												
<b>Section-C</b>	<b>Answer the given question, which carries <u>twenty</u> marks. [20 Marks]</b>	<b>COs</b>																																												
Q12	Explain how the ten functions of PPC are executed in a manufacturing plant, if the plant runs a patch production system.	4																																												
	OR																																													
	Explain the seven popular tools used for <i>Quality Control</i> in a manufacturing organization, which looks for continuous improvement.	4																																												