



Plot No. 2, Knowledge Park-III, Greater Noida (U.P.) –201306

**POST GRADUATE DIPLOMA IN MANAGEMENT (2023-25)  
END TERM EXAMINATION (TERM- II)**

Subject Name: **Production & Operations Management**  
Sub. Code: **PG24**

Time: **02.00 hrs.**  
Max Marks: **40**

**Note: All questions are compulsory. Section A carries 5 marks: 5 questions of 1 mark each, Section B carries 21 marks having 3 questions (with internal choice question in each) of 7 marks each and Section C carries 14 marks one Case Study having 2 questions of 7 marks each.**

<b><u>SECTION - A</u></b>		
Attempt all questions. All questions are compulsory.		<b>1×5 = 5 Marks</b>
Questions	CO	Bloom's Level
<b>Q. 1: (A).</b> Why does ERP matter for an organization? Justify. <b>Q. 1: (B).</b> Define Reverse Engineering. <b>Q. 1: (C).</b> What is “MRP II”? Mention. <b>Q. 1: (D).</b> Write a short note on Inventory management. <b>Q. 1: (E).</b> Name any three tools available in the market for CRM/ERP/Project operations.	CO1	L-1 & L-2
<b><u>SECTION – B</u></b>		
All questions are compulsory. (Each question has an internal choice. Attempt any one (either A or B) from the internal choice)		<b>7 x 3 = 21 Marks</b>
Questions	CO	Bloom's Level
<b>Q. 2: (A).</b> What is the significance of “Lean operations” for production and material management.  <p style="text-align: center;"><b>Or</b></p> <b>Q. 2: (B).</b> Explain ABC analysis. How is it related to managing inventory in a smarter way? Elaborate with the help of an example.	CO2	L-2 & L-3
<b>Q. 3: (A).</b> Demand recorded the previous year for a CRM platform was 30,000 units, average order cost was \$3,000 & holding cost was \$12 per unit, per year. Evaluate EOQ and provide your recommendation for projected quantities in such a scenario.  <p style="text-align: center;"><b>Or</b></p> <b>Q. 3: (B).</b> Draw product life-cycle for a smart factory developing laptops. Also, describe each of the phases involved in this process.	CO3	L-3 & L-4
<b>Q. 4: (A).</b> Company “ABC” is willing to launch a new car showroom in Greater Noida. The location factors, ratings and scores for top-most potential sites are shown below:		L-4

S.No	Location Factor	Factor Rating	Rating for location 1	Rating for location 2	CO3	& L-5
1	Infra optimization	8	3	6		
2	Consumer Demand	5	5	4		
3	Average lead time	7	5	4		
4	Showroom making charges	5	3	4		
5	Employee culture	9	8	7		

Using Weighted factor method or, locational economics method, Evaluate the best location among the two given above.

**Or**

**Q. 4: (B).** Write the pros & cons of Combined Layouts. Also, give examples for each.

**SECTION - C**

Read the case and answer the questions:

**7×02 = 14 Marks**

Questions	CO	Bloom's Level																																	
<p>Q. 5: Case Study:</p> <p>Organization “ABC” produces luxury Bikes. Quality analyst ensures that each product is fit for use upto 80,000 kms. Professional monitors input-output data. This data consists of sets regarding 900 Bikes. These bikes are divided into ten batches. Analyst tests 5 Bikes from each of the batch and results into following data recording in thousands of KMs:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Batch</th> <th>B1</th> <th>B2</th> <th>B3</th> <th>B4</th> <th>B5</th> <th>B6</th> <th>B7</th> <th>B8</th> <th>B9</th> <th>B10</th> </tr> </thead> <tbody> <tr> <td><math>\bar{X}</math></td> <td>80.2</td> <td>84.1</td> <td>82.6</td> <td>78.8</td> <td>83.2</td> <td>81.5</td> <td>80.9</td> <td>79.3</td> <td>77.8</td> <td>81.9</td> </tr> <tr> <td><math>\bar{R}</math></td> <td>1.2</td> <td>1.8</td> <td>1.7</td> <td>0.5</td> <td>2.1</td> <td>1.4</td> <td>1.8</td> <td>1.2</td> <td>1.2</td> <td>1.4</td> </tr> </tbody> </table> <p>[Pre-defined value for constant factor, against sample size is 2.33]</p> <p>Questions:</p> <p><b>Q. 5: (A).</b> Construct an X-chart based on the data for this Bike production process.</p> <p><b>Q. 5: (B).</b> Is this production process under control? Justify your opinion and write recommendations for the risks discovered in this process.</p>	Batch	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	$\bar{X}$	80.2	84.1	82.6	78.8	83.2	81.5	80.9	79.3	77.8	81.9	$\bar{R}$	1.2	1.8	1.7	0.5	2.1	1.4	1.8	1.2	1.2	1.4	CO4	L-5 & L-6
Batch	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10																									
$\bar{X}$	80.2	84.1	82.6	78.8	83.2	81.5	80.9	79.3	77.8	81.9																									
$\bar{R}$	1.2	1.8	1.7	0.5	2.1	1.4	1.8	1.2	1.2	1.4																									

COs	Marks Allocated
CO1	5 Marks
CO2	7 Marks
CO3	14 Marks
CO4	14 Marks

