

Semester: Dec - April 2024		
Examination: End term Examination		
Program code: 17 Program: PGDM EXE	Class: SY	Semester: III
Name of the Constituent College: K. J. Somaiya Institute of Management	Name of the department/Section/Center: Operations	
Course Code: 117I17E307	Name of the Course: Operations Planning and Control	

Maximum Marks: 25
Duration: 1.5 hrs

Date: 24-04-24

- Instructions:-** 1) Choose questions to have a total of 25 marks
2) Q 5 is compulsory

Question No.		Max. Marks												
Q 1)	Describe the evolution of Operations Management as a subject indicating some of the major contributors and their contribution	5												
Q 2a)	Define productivity. What are the three measures of productivity?	2												
2b)	For the festive season, Delicious Sweets LLP offered customized gift hampers. The organization has completed two large orders for corporate gifting as given below. For which order was the organization productivity higher?	3												
	<table border="0" style="width: 100%;"> <tr> <td></td> <td style="text-align: center;">Order 1</td> <td style="text-align: center;">Order 2</td> </tr> <tr> <td>No. of gift hampers</td> <td style="text-align: center;">200</td> <td style="text-align: center;">100</td> </tr> <tr> <td>No. of workers</td> <td style="text-align: center;">4</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Working hours/day</td> <td style="text-align: center;">8</td> <td style="text-align: center;">8</td> </tr> </table>		Order 1	Order 2	No. of gift hampers	200	100	No. of workers	4	3	Working hours/day	8	8	
	Order 1	Order 2												
No. of gift hampers	200	100												
No. of workers	4	3												
Working hours/day	8	8												

	No. of days	3.5	3	
Q 3a)	Define cycle time, throughput rate, and throughput time for a process.			3
3b)	<p>A lock manufacturer manufactures locks in 3 sizes, Large, Medium and Small. The set up time for the machine is 45 minutes. A worker takes 30 minutes to manufacture one Lock.</p> <p>a) For a batch size of 100 locks of Medium size, calculate the following:</p> <ul style="list-style-type: none"> i) Run time ii) Operation time iii) Cycle time iv) Throughput rate v) Capacity 			5
3c)	What type of manufacturing process is recommended for manufacture of locks?			2

Q 4)	Describe in detail the various phases of new product development with a suitable example	5
Q 5a)	State the assumptions in standard EOQ model. How are some of these factored suitably through additional steps?	3
5b)	An auto parts supplier sells Hardy-brand batteries to car dealers and auto mechanics. The annual demand is approximately 1,200 batteries. The supplier pays \$28 for each battery and estimates that the annual holding cost is 30 percent of the battery's value. It costs approximately \$20 to place an order (managerial and clerical costs). The supplier currently orders 100 batteries per month. a. Determine the ordering, holding, and total inventory costs for the current order quantity. b. Determine the economic order quantity (EOQ). c. How many orders will be placed per year using the EOQ? d. Determine the ordering, holding, and total inventory costs for the EOQ. e) How has ordering cost and holding cost changed? f) Total inventory cost changed? g) Savings by following EOQ?	7
Q6)	Explain in detail some of the key elements of ISO 9001 and ISO 14001	10
Q7)	One of the main elements of TPS is reduction of waste. Enumerate the various steps advocated by TPS to reduce waste in an organization	5