

Total No. of Questions: 6

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Enrollment No.....



Faculty of Management Studies  
End Sem (Even) Examination May-2022  
MS5CO10 Operations Management

Programme: MBA

Branch/Specialisation: Management

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. If the output is ₹ 10000 and labour input is ₹ 2000 what will be the labour productivity of the firm? 1  
(a) 5 (b) 0.2 (c) 8000 (d) 1
- ii. Which type of production system is best suited for approved medicine in a pandemic situation? 1  
(a) Job shop production (b) Batch production  
(c) Mass production (d) None of these
- iii. Which among the following is not a quantitative method for a plant location? 1  
(a) Centre of gravity model (b) Median model  
(c) Dimensional analysis (d) Load distance cost matrix
- iv. The strategy used for production of Dassault rafale fighter jet is- 1  
(a) Make to stock (b) Make to order  
(c) Assemble to order (d) None of these
- v. Which of the following is not a type of qualitative forecasting? 1  
(a) Opinion survey (b) Market trial  
(c) Exponential smoothing (d) Delphi technique
- vi. The demand of “Masks” in the past few months followed which type of variation. 1  
(a) Trend variation (b) Seasonal variation  
(c) Cyclic variation (d) Irregular variation
- vii. If the balance delay in the system is 20% what will be its line efficiency 1  
(a) 70% (b) 80% (c) 20% (d) 120%

P.T.O.

[2]

- viii. The Job flow time will be minimum in which type of sequencing rule- **1**  
 (a) SPT (b) CRR (c) EDD (d) STR
- ix. Standard deviation in six sigma application is referred as the difference **1**  
 from the-  
 (a) Target (b) Specific Limits  
 (c) Nearest fit value (d) Mean
- x. Which among the following is not a quality guru? **1**  
 (a) Fowler (b) Deming (c) Crosby (d) Juran

- Q.2 i. What do you understand by operation management? What are the **4**  
 functions of operation manager?
- ii. What are different types of production system? Also draw their volume- **6**  
 variety graph.
- OR iii. The following information about the output production and input **6**  
 consumed for a particular time period of company is given below:  
 Output = ₹ 50000  
 Human input = ₹ 5000  
 Material input = ₹ 10000  
 Capital input = ₹ 20000  
 Energy input = ₹ 3000  
 Misc. Input = ₹ 2000  
 Find total productivity and partial productivity of the firm?

- Q.3 i. What is facility? Why facility planning is so important? **4**  
 ii. What are the various types of plant layout? Write down the advantages **6**  
 and disadvantages of each.
- OR iii. If you are responsible for making decision on the basis of given data **6**  
 which site you would select.

Site	Labour cost	Power cost	Educational facility	Health facility
M	200,000	400,000	2	2
N	100,000	250,000	6	4
Weightage	1	1	2	2

[3]

- Q.4 i. Define aggregate production planning and state its objective. **4**  
 ii. What are various types of forecasting? Give a brief description about **6**  
 forecasting errors.
- OR iii. The sale of a car in a showroom for 4 consecutive months is given **6**  
 below. If smoothing constant ( $\alpha$ )=0.5. If the forecast for the month of  
 January is 80 units find the forecast for the month of February, March,  
 April and May.

Month	January	February	March	April
Demand	100	120	115	100

- Q.5 i. Define sequencing. What is the difference between tardiness and **4**  
 lateness?
- ii. What do you understand by precedence diagram, also explain the **6**  
 parameters of line balancing?
- OR iii. Find the optimum sequence for the following set of job also find the **6**  
 make span time and idle time

Job	A	B	C	D	E	F
Machine 1	7	4	2	5	9	8
Machine 2	3	8	6	6	4	1

- Q.6 Attempt any two: **5**  
 i. What is benchmarking and what is its importance? **5**  
 ii. What do you understand by acceptance sampling? **5**  
 iii. What are the two methodologies in six sigma? **5**

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**Marking Scheme**  
**MS5CO10 Operations Management**

Q.1	i.	If the output is ₹ 10000 and labour input is ₹ 2000 what will be the labour productivity of the firm?	1
	(a)	5	
	ii.	Which type of production system is best suited for approved medicine in a pandemic situation?	1
	(c)	Mass production	
	iii.	Which among the following is not a quantitative method for a plant location?	1
	(d)	Load distance cost matrix	
	iv.	The strategy used for production of Dassault rafale fighter jet is-	1
	(b)	Make to order	
	v.	Which of the following is not a type of qualitative forecasting?	1
	(c)	Exponential smoothing	
	vi.	The demand of “Masks” in the past few months followed which type of variation.	1
	(d)	Irregular variation	
	vii.	If the balance delay in the system is 20% what will be its line efficiency	1
	(b)	80%	
	viii.	The Job flow time will be minimum in which type of sequencing rule-	1
	(a)	SPT	
	ix.	Standard deviation in six sigma application is referred as the difference from the-	1
	(d)	Mean	
	x.	Which among the following is not a quality guru?	1
	(a)	Fowler	
Q.2	i.	Operation management	2 marks
		Functions of operation manager	2 marks
	ii.	Different types of production system	4 marks
		Their volume-variety graph	2 marks
OR	iii.	As per solution and explanation	6
		Total productivity	1 mark
		Five partial productivity of the firm	(1 mark * 5)

Q.3	i.	Facility	2 marks	4
		Importance of facility planning	2 marks	
	ii.	Various types of plant layout	3 marks	6
		Their advantages and disadvantages of each	3 marks	
OR	iii.	As per solution and explanation		6
		Formula	1 mark	
		Procedure	4 marks	
		Answer	1 mark	
Q.4	i.	Aggregate production planning	2 marks	4
		Its objective	2 marks	
	ii.	Types of forecasting	4 marks	6
		Forecasting errors	2 marks	
OR	iii.	As per solution and explanation		6
Q.5	i.	Definition of sequencing	2 marks	4
		Difference between tardiness and lateness	2 marks	
	ii.	Precedence diagram	2 marks	6
		Any four parameters of line balancing	(1 mark * 4)	
OR	iii.	As per solution and explanation		6
		Job sequence	2 marks	
		Procedure	2 marks	
		Make span time	1 mark	
		Idle time	1 mark	
Q.6		Attempt any two:		
	i.	Benchmarking	3 marks	5
		Its importance	2 marks	
	ii.	Acceptance sampling	5 marks	5
	iii.	DMAIC	2.5 marks	5
		DMADV	2.5 marks	

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