CONTINUOUS INTERNAL EVALUATION- 1

Dept:ME	Sem : 5	Sub: Operations Management	S Code: 18ME56
Date: 23.11.2022	Time: 3:00-4:30 pm	Max Marks: 50	Elective:N

Note: Answer any 2 full questions, choosing one full question from each part.

QN		Questions	Marks	RBT	COs
		PART A			
1	a	A firm has rated capacity of manufacturing 30000 units, but due to poor sales it isworking at 25% of its rated capacity. The expenses are as below: a) Fixed production expenses : Rs. 2,70,000/- b) Direct material Cost : Rs. 62,000/- c) Fixed sales expenses : Rs.30,000/- d) Variable production expenses : Rs. 80,300/- e) Direct labour Cost : Rs. 52,200/- f) Variable Sales Expenses : Rs 15,000/- 1. Determine BEP when each unit is sold at Rs 55/- per unit 2. If the sales increase to 24000 units per year and selling price reduced to Rs 40/- per unit, what would be the profit or loss 3. What is the new BEP?	15	L2	CO1
	b	With a sketch explain the classification of production systems	10	L2	CO1
		OR			
2	a	What is decision making? What are the steps involved in decision making, explain	10	L2	CO1
	b	A company produces desks and benches. The production process for each is similar in that both require a certain number of hours of carpentry work and a certain number of labour hours in the painting department. Each desk takes 4 hours of carpentry and 2 hours in the painting department. Each bench requires 3 hours of carpentry and 1 hour in the painting department. During the current production period, 240 hours of carpentry time are available and 100 hours in painting is available. Each desk sold yields a profit of Rs15; each bench produced is sold for a Rs 10 profit. Find the best combination of desks and benches to manufacture in order to reach the maximum profit using graphical linear programming.	15	L3	CO1
		PART B			
3	a	What is forecasting? Explain the steps involved in forecasting process	10	L2	CO2
	b	Afirm uses simple exponential smoothing with α =0.1 to forecast sales.The forecast for week ending Feb 1 was 500 units where as actual demand turned out to be 450 units. 1) Forecast the demand for week ending on Feb 8 2) Assume the actual demand during the week ending on Feb 8 turned out to be 505 units. Forecast the demand for week	15	L2	CO1

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		ending on Feb 15. Continue the forecasting through March 15, assuming that the subsequent demands were actually 516, 488, 467, 554, and 510 units.			
		OR			
4	a	Describe the elements of a good forecast	10	L2	CO2
	b	The data of sales of a particular company is given as below Month: Jan 585, Feb 610, Mar 675, Apr 725, May 852, Jun 970 Forecast the demand for the month of July using 1. Simple Average 2. A three month moving average 3. A three month weighted moving average with 0.5 for the latest month, 0.3 and 0.2 for the previous months respectively.	15	L2	CO1

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