Hall Ticket Number:

Code No. : 16503 AS N(B)

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD B.E. (Mech. Engg.: CBCS) VI-Semester Advanced Supplementary Examinations, July-2019

Production and Operation Management

(Elective-I)

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A $(10 \times 2 = 20 \text{ Marks})$

- 1. Define operations management and mention its primary objective.
- 2. Explain salient features of method study.
- 3. Differentiate between qualitative and quantitative models of forecasting.
- 4. What are the possible reasons for forecast errors?
- 5. List various strategies pertaining to aggregate planning.
- 6. How to decide planned orders to be released?
- 7. Discuss briefly the role of inventory control techniques in manufacturing industries.
- 8. Explain the concept of ABC analysis.
- 9. Define the terms Network diagram and critical path.
- 10. What are the significant aspects of Fulkerson's rule?

Part-B (5 ×10 = 50 Marks)

What are the various types of production systems? Explain any two of them.								[5]	
Draw break	even chart a	nd explain	its objectives	s and applica	ations.			[5]	
.a) "Accuracy in the forecasting values is very much essential for the success of an organization" - Elaborate your views with proper analysis and justification.									
The past act	ual demands	s of a produ	ct are as sho	wn below				[6]	
Month	Oct	Nov	Dec	Jan	Feb	March			
Demand	84	89	86	90	92	96			
ii) If the for the	forecast for e month of A	March is 9 April by cor	4 units what sidering smo	will be the	exponential		orecast	[5]	
Define Master production scheduling and mention its prerequisites.									
Define inventory and explain various types of costs involved in deterministic inventory control analysis.								[4]	
Annual demand of a particular component is 3200 units. The unit cost is Rs. 6 and the inventory carrying cost is Rs. 1.50 per unit per year. If the ordering cost is Rs. 150 per order, Calculate optimum order quantity, number or orders per year and total optimal cost.									
	Draw break "Accuracy in – Elaborate The past act Month Demand i) Calcu ii) If the for the List out and Define Mass Define inver- control anal Annual deminventory ca	Draw break even chart a "Accuracy in the forecas – Elaborate your views of The past actual demands Month Oct Demand 84 i) Calculate three ma ii) If the forecast for for the month of A List out and explain var Define Master production Define inventory and econtrol analysis. Annual demand of a painventory carrying cost	Draw break even chart and explain"Accuracy in the forecasting values – Elaborate your views with properThe past actual demands of a produceMonthOctNovDemand8489i)Calculate three months moving for the forecast for March is 9 for the month of April by constructionList out and explain various element Define Master production scheduling Define inventory and explain variousDefine inventory and explain various control analysis.Annual demand of a particular continuentory carrying cost is Rs. 1.50 production	 Draw break even chart and explain its objectives "Accuracy in the forecasting values is very much – Elaborate your views with proper analysis and The past actual demands of a product are as sho Month Oct Nov Dec Demand 84 89 86 i) Calculate three months moving averages ii) If the forecast for March is 94 units what for the month of April by considering smaller List out and explain various elements of cost. Define Master production scheduling and mention Define inventory and explain various types of control analysis. Annual demand of a particular component is inventory carrying cost is Rs. 1.50 per unit per y 	 Draw break even chart and explain its objectives and applica "Accuracy in the forecasting values is very much essential for - Elaborate your views with proper analysis and justification The past actual demands of a product are as shown below Month Oct Nov Dec Jan Demand 84 89 86 90 i) Calculate three months moving averages forecast for a ii) If the forecast for March is 94 units what will be the for the month of April by considering smoothing factor List out and explain various elements of cost. Define Master production scheduling and mention its prerequired. Define inventory and explain various types of costs invo control analysis. Annual demand of a particular component is 3200 units. inventory carrying cost is Rs. 1.50 per unit per year. 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If the ordering cost is Rs. 150 per order,	

	Activity	1-2	1-3	2-3	2-4	3-4	3-5	4-5	
	Duration (days)	4	5	3	7	5	6	4	
16.a)	What is work r	neasureme	ent? Exp	olain its p	procedure.				
b)	Differentiate b	etween sin	nple and	weighte	d average	forecasting	g technique	es with example	es.
17.	Answer any tw	o of the fo	llowing						
a)	Materials Requ	uirement Pl	lanning	(MRP).					
b)	Probabilistic in		-						
c)	Crashing of ne								
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