

**VIT**

Vellore Institute of Technology

Fall Semester 2019-20

Continuous Assessment Test – II

Programme Name & Branch: B.Tech. / Mechanical

Course Name & Code: Industrial Engineering and Management & MEE1014
 Class Number: VL2019201006801 Slot: G2
 Exam Duration: 90 minutes Maximum Marks: 50 Faculty Name: Dr.S.Thiagarajan

General instruction:

Answer all questions

Answer all questions

S. No.	Questions	Marks	Course Outcome (CO)
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1. Consider the following layout problem.
Number of departments in the layout = 6
Areas of departments:

Department	Area (sq.m.)
1	16,000
2	24,000
3	10,000
4	20,000
5	16,000
6	12,000

The Relationship Chart:

From						
1	-					
2	A	-				
3	O	U	-			
4	E	E	I	-		
5	I	A	U	I	-	
6	E	I	O	E	A	-
To	1	2	3	4	5	6

Minimum department preference value (MDP) = 1 = 4

Sweep width = 2

State and apply ALDEP algorithm to design a suitable layout by performing two iterations.

2. Use the Rank Order Clustering algorithm to reorder the seven machines and six components given below.

Component	Machine required for operation			
3B15	B	D	A	E
3B27	C	F	G	-
4C18	F	C	G	-
5CA1	B	A	E	D
1FB1	B	D	C	-
1FB3	B	D	C	E



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3.	With suitable examples, explain various types of layouts used by production systems.	(10)	CO5
4.	A large international computer software unit is planning to set up such a facility in India. Where should it set up the facility and why?	(10)	CO5