Se	at No	.:					En	rolment	No		
Sı	ubjec	ME	GUJARAT T - SEMESTER I de: 2720814					SUMME		05/201	6
Ti	ime: struct	10:30 ions:	me: COMPUT am to 01:00 p empt all questions	m	OED M	ANUFA	ACTUF		tal Mar	·ks: 70	)
			ke suitable assum ures to the right in			•					
Q.1 (a) What is the meaning of MRP? Explain main objectives of MRP syllist the input of MRP.						system and also 0°					
	<b>(b)</b>	Write	e a short note on fl	lexible m	anufactu	ring syste	em.				07
Q.2	(a)	Explain the types of production with suitable examples.							07		
	<b>(b)</b>	What	What is the meaning of simulation? Explain the purpose of simulation. 07								07
				OR							
	(b)	What is the meaning of computer aided process planning? Explain retrieval type of process planning with neat sketch.							07		
Q.3 (a) Explain the steps of Computerized Relative Allocation of Facility Technalgorithm.						nique	07				
<b>(b)</b> Describe about the line of balance.							07				
					0	R					
Q.3	(a)	Compare the rural and urban sites for plant location.								07	
	(b)	A printer has one printing press, one binding machine and manuscripts of six books for publication. The duration required in days for printing and binding the books are given below:							07		
			Books	1	2	3	4	5	6		
			Printing time (days)	30	120	50	20	90	110		
			Binding time (days)	80	100	90	60	30	10		

In what orders books selected so as to minimize the total duration to publish all the books.

Q.4 (a) Describe the lean manufacturing concept.

**(b)** Write a short note on shop floor data collection systems.

OR

Q.4 (a) Explain the rank order clustering technique.

07

**07** 

**07** 

**(b)** Design the layout for following problem using ALDEP algorithm technique.

Department	Function	Area	No of sq. required	
1	Receiving	24000	60	
2	Milling	12000	30	
3	Press	12000	30	
4	Assembly	16000	40	
5	Painting	12000	30	
6 Shipping		12000	30	
7	Гotal	88000	220	

## Relationship Chart

1						
2	A					
3	Е	U				
4	I	Е	О			
5	A	I	I	I		
6	U	I	О	U	A	
ТО	1	2	3	4	5	6

MDP = I = 4

Sweep width = 2

Number of iteration to be perform = 1

Q.5 (a) Discuss the application of simulation in machine shop.

**07** 

**(b)** Explain the objectives of good facility layout.

**07** 

OR

Q.5 (a) Explain about composite part concept used in group technology.

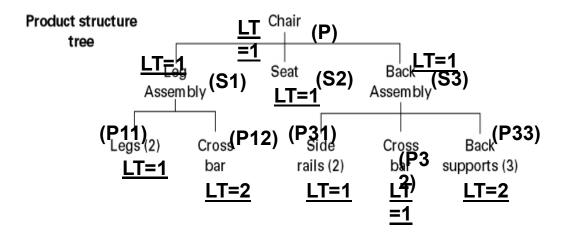
**07** 

(b) The product structure for the wood chair (P) is shown in Fig. 1. Compute MRP output for all items.

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Product P is to be supplied 50 & 60 in week no. 7 & 9 respectively. The schedule receipt for product S2 is 30 in week no.3 & for product P31 is 50 in week no.4. The inventory status is given below:

Item	P11	P31		
On hand	60	50		



LT = Lead Time in Week

Fig. 1 The Product tree structure for product P