Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY ME SEMESTER II EXAMINATION – SUMMER 2017

Subject Code: 2720814	Date: 29/05/2017
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Subject Name: Computer Aided Production Management

Time:02:30 PM to 05:00 PM Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.
- Q.1 (a) Explain about Flexible Manufacturing System (FMS) in brief. Discuss 07 the different FMS layout configurations.
 - (b) Define Material Requirement Planning (MRP). What are the various **07** types of demands? Explain various inputs of MRP.
- Q.2 (a) Explain the various factors considered for plant location. 07
 - (b) Describe various modes of production with suitable examples. 07

OR

- (b) Define Group technology. Explain about OPITZ coding system in detail. 07
- Q.3 (a) Explain generative type of process planning in detail.
 - (b) Write a short note on simulation process. 07

OR

- Q.3 (a) Describe the various types of scheduling. 07
 - **(b)** What is the meaning of Relationship chart? List the steps of automated **07** layout design program.
- Q.4 (a) Discuss about shop floor data collection systems. 07
 - (b) Explain the purpose of simulation and limitation of simulation. 07

OR

- Q.4 (a) Explain scheduling in brief. Discuss about two jobs and n machines 07 procedure.
 - (b) Describe the systematic layout design procedure with sketch. 07
- Q.5 (a) Discuss about automatic data collection systems.

(b) The steel chair is to be supplied 500 (units) in week 8.

07

The MRP of A & D are 50 units in week 3 for Repairing and Replacement work.

Schedule Receipt for A is 50 units in week 3.

The product tree structure and inventory status are given in Fig. 1 and Fig. 2 respectively.

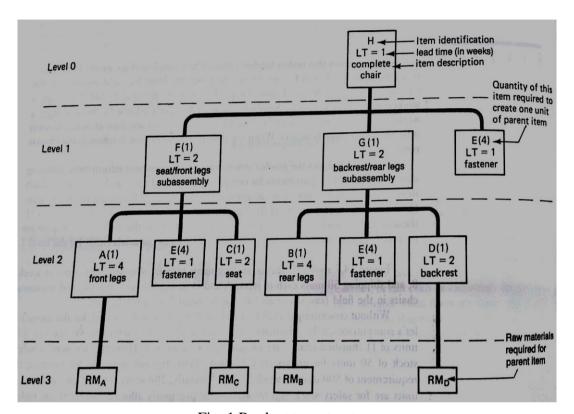


Fig. 1 Product tree structure

Item	Н	G	F	A	C	В	D	E
On hand	100	200	52	50	60	150	52	500
Safety Stock	50	30	30	20	20	20	20	300
Allocated	0	60	20	30	30	30	30	150

Fig. 2 Inventory status

OR

Q.5 (a) Write a short note on Manufacturing Resources Planning (MRP-II).

07

(b) Obtain the part family and machine group for the incidence matrix given 07 in table using rank order clustering method.

Machines	Parts						
	1	2	3	4	5	6	7
1	1	1				1	1
2			1	1	1		
3	1					1	1
4						1	1
5			1	1			
