

GANPAT UNIVERSITY
M.TECH. SEM. II – CAD-CAM
REGULAR EXAMINATION MAY/JUNE - 2012
3ME213 COMPUTER AIDED PRODUCTION MANAGEMENT

Time: 3 Hours

Total Marks: 70

Instructions:

- 1). All questions are **compulsory**.
- 2). Figures to the **right** indicate full marks.
- 3). Answers to the two sections must be written in **separate** answer books.
- 4). Assume all necessary data.

Section – I**Que:-1 Attempt All.**(A) (1) What are manufacturing systems, and how they distinguished from production System? [12]
[04]

(2) What is flexible automation and what are some it's features? [02]

(B) (1) What is programmable automation and what are some it's features? [04]

(2) What is a production system? [02]

OR**Que:-1 Attempt All.**

(A) Explain in detail an automation migration strategy? [06]

(B) (1) What is computer integrated manufacturing? [03]

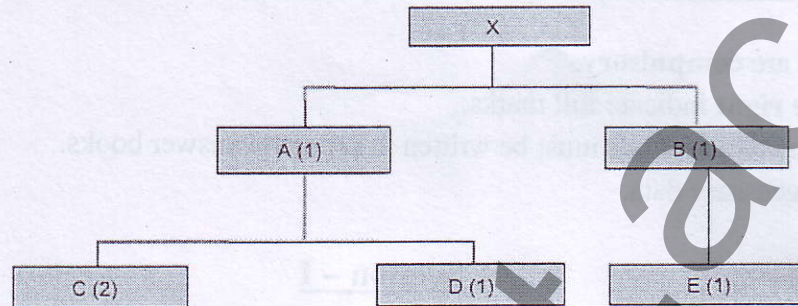
(2) Explain USA principle [03]

Que:-2 Attempt All.(A) 1. Determine the net requirements for the three items shown in table. [11]
[02]

	Switches	Microprocessor	Keyboards
Gross requirements	55	14	28
On-hand Inventory	18	2	7
Inventory on order (scheduled receipt)	12	12	10

2. Given the product structure tree shown in table compute the net requirements for A, B, C, D, and E, to produce 50 units of X. [04]

Components	A	B	C	D	E
Inventory on hand and on order	20	10	15	30	100



- (B) (1) How does master scheduling differ under manufacturing strategies of (a) make-to-stock, (b) assemble-to-order, and (c) make-to-order? [03]

- (2) What is available-to-promise inventory, and how it is determined? [02]

OR

Que:-2 Attempt All. [11]

- (A) Explain PAB,PTF,DTF and MPS [05]

- (B) 1. What is aggregate planning? [03]

2. What are the major inputs to master production schedule? [03]

Que:-3 Attempt All. [12]

- (A) 1. What is forecast? [01]

2. What is exponential smoothing? [02]

3. Summarize the key features of the more commonly used forecasting method. [01]

4. Distinguish between, (a) simple regression, and (b) simple correlation. [02]

- (B) 1. Explain the (a) trend, (b) seasonal, (c) cyclical, and (d) random components of a Series. [04]

2. What steps are involved in using time series data to make a forecast? [02]

Section – II

Que:-4 Attempt All.

[12]

- (A) 1)Gross requirements
2)Scheduled receipts
3)On hand/available
4)Net requirements
5)Planned-order receipt
6)Planned-order release

[06]

(B) Explain in detail manufacturing resource planning.

[06]

OR

Que:-4 Attempt All.

[12]

- (A) Explain in detail MRP and it's inputs.
(B) Explain ERP implementation strategy

[06]

[06]

Que:-5 Attempt All.

[11]

- (A) Discuss the integration of CAD database and CMM operation.
(B) What is Kanban ? What are the two type of Kanban ?

[06]

[05]

OR

Que:-5 Attempt All.

[11]

- (A) (1)Explain seven wastes in JIT
(2) Describe the features of a flexible inspection system.
(B) Give comparison of MRP and JIT

[04]

[02]

[05]

Que:-6 Attempt All

[12]

- (A) Discuss the different types of manufacturing simulation.
(B) Explain following term
(1) Online inspection
(2) Offline inspection
(3) In - process inspection
(4) Post – process inspection
(C) How does automotive industry use simulation to design manufacturing systems?

[04]

[04]

[04]

END OF PAPER