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FACULTY OF ENGINEERING

B.E. 4/4 (Mech/Prod.) II-Semester (Main) Examination, May / June 2012

Subject : **Manufacturing Systems and Simulations**
(Elective-II)

Time : 3 Hours

Max. Marks: 75

Note: Answer **all** questions of Part - A and answer any **five** questions from Part-B.

PART – A (25 Marks)

Describe the following :

1. Modes of production
2. List various simulation languages
3. Characteristics of CIM
4. Mention the various components of FMS.
5. What is meant by system simulation?
6. Distributed log model.
7. What is a logistic curve?
8. Define the terms of queue length and system length.
9. Features of SIMSCRIPT system.
10. Distinguish between GPSS and SIMSCRIPT.

PART – B (5x10=50 Marks)

- 11.(a) Explain various transformational and procedural aspects of manufacturing.
(b) What is the role of management information system in manufacturing? Briefly explain with an example?
- 12.(a) What is meant by Industrial automation? Briefly explain different types of automation.
(b) List the various characteristics of automatic material handling system.
- 13.(a) Compare and contrast between continuous and discrete event simulation.
(b) Explain different types of simulation models.
14. Classify different types of queuing models.
In a bank, 20 customers on the average, are served by a cashier in an hour. If the service time has exponential distributions, what is the probability that
(i) it will take more than 10 minutes to serve a customer?
(ii) a customer shall be free within 4 minutes?
- 15.(a) Discuss the features of GPSS simulation language.
(b) What are the various simulation algorithms used in SIMSCRIPT? Explain them briefly.
- 16.(a) Discuss various decision making procedures adopted in manufacturing systems.
(b) Explain online production control systems.
17. Write short notes on any **two** of the following :
(a) Cob Web model
(b) Analog and hybrid computers
(c) Programming in GPSS