

Roll No

MCA - 504(A)**MCA. V Semester**

Examination, December 2015

Modeling and Simulation

(Elective - II)

Time : Three Hours**Maximum Marks : 70**

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
- ii) All parts of each question are to be attempted at one place.
- iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
- iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Define Simulation. Also write why we need simulation?
- b) Write two advantages and two disadvantages of simulation.
- c) Write classification of simulation languages.
- d) Write about steps in a simulation study with explanation.

OR

Describe the features of simlib languages.

Unit - II

2. a) Define Continuous simulation.
- b) What type of notation used in queueing system?
- c) What is Random Number? Give name of technique to generate Random Number.

- d) Explain Monte Carlo Method.

OR

Describe about Cobweb Models.

Unit - III

3. a) What is CSSLS?
- b) Write difference between digital and analog simulators.
- c) What are logistic curves? Where it is used?
- d) Draw system dynamics diagram with explanation.

OR

Explain about Growth and Decay model.

Unit - IV

4. a) What is stochastic variables?
- b) Define discrete simulation.
- c) Are the mean, median and mode equal for every symmetric distribution.
- d) Discuss about different type of technique to generate Random numbers.

OR

Explain simulation of telephone system.

Unit - V

5. a) Define action times. Where it is used?
- b) What type of features used in simulation?
- c) What is GPSS? What its advantages?
- d) Discuss about simulation of a supermarket transfer models.

OR

How GPSS model applied to any application? Explain with the example.
