

Student Registration Number

B

COURSE CODE: DCAP601

COURSE TITLE: SIMULATION AND MODELLING

Date: 22-Sep-2013

Time: 09:30-12:30

Time Allowed: 3 hours

Max. Marks: 80

1. *This paper contains 10 questions divided in two parts on 1 page.*
2. **Part A is compulsory.**
3. **In Part B (Questions 2 to 10), attempt any 6 questions out of 9. Attempt all parts of the selected question.**
4. *The marks assigned to each question are shown at the end of each question in square brackets.*
5. *Answer all questions in serial order.*
6. **The student is required to attempt the question paper in English medium only.**

Part-A

Q1.

- a) What do you mean by DFD? [2]
- b) What do you mean by State Machine Model? [2]
- c) What do you mean by Discrete-Event Simulation? [2]
- d) List out all the methods to employing Monte Carlo. [2]
- e) What is Queuing System? [2]
- f) What do you mean by Output Statistics? [2]
- g) What do you mean by PERT? [2]
- h) What is Random Seed? [2]
- i) What are the Approaches to describe the discrete simulation? [2]
- j) What is Parasite Transmission? [2]

Part-B

- Q2. Identify six different problems from your own experience that you think should be solved using digital simulation rather than analytically. [10]
- Q3. Differentiate between Numerical integration and Continuous system simulation, what are the methods used in numerical integration? [10]
- Q4. "The simulation must keep track of the current simulation time." Elaborate the statement. [10]
- Q5. Discuss the integration of Monte Carlo and its methods. Also discuss its applications. [10]
- Q6. Describe four specific models as valuable POM applications with examples. [10]
- Q7. "PERT / CPM is effectual tool for project planning" Comment the statement. [10]
- Q8. Describe the Validation of Qualitative and Quantitative Simulation. [10]
- Q9. GPSS/H is a very power full simulation tool. Elaborate. [10]
- Q10. How parallel simulation languages differ from general purpose programming language? Explain with example. [10]