Tribhuwan University

Institute Of Science and Technology

Simulation and Modeling

2071

Full Marks : 60

Pass Marks : 24

Time : 3 Hours

Group A

Attempt any two questions :   (2*10=20)

1.) Explain the steps in simulation study. What are the limitations of simulation?

2.) Explain the Markovchains with examples and its applications.

3.) What do you mean by uniformity test? Explain the poker test with example.

Group B

Attempt any eight questions :   (8*5=40)

4.) What are the types of simulation models?

5.) What are the elements of queuing system?

6.) What do you mean by pseudo random numbers?

7.) Explain the process of testing for auto-correlation test.

8.) Explain with example of calibration and validation of model.

9.) Explain the replication of runs.

10.) Use the multiplicative congruential method to generate of five digit random integers. X_0=118, a=45 and m=1000.

11.) What do you mean by simulation tool?

12.) Explain with example verification of simulation models.

13.) Write short notes on :

a.) Discrete systems modeling

b.) Feedback systems