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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (CSE) (2012 to 2017) (Sem.-6)

**SIMULATION AND MODELING**

Subject Code : BTCS-601

M.Code : 71107

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt ANY FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt ANY TWO questions.

**SECTION-A**

Answer briefly :

1. Name any four simulation software.
2. What is modeling?
3. Differentiate between analytical and numerical simulation.
4. What is hold and store block GPSS?
5. Write any two properties of pseudo random numbers.
6. How sample size is decided in simulation?
7. What do you mean by discrete system simulation?
8. Explain the concept of probability functions.
9. Give example of continuous system simulation.
10. What are the types of system models available?



**SECTION-B**

11. Explain Kolmogorov-Smirnov test with example.
12. What is the method for testing random number generation of no uniformly distributed random number?
13. Suppose that arrivals to a Bank occur at a rate of 2 per minute from 8 A.M. until 12 P.M., then drop to 1 every 2 minutes until the day ends at 4 P.M. What is the Probability distribution of the number of arrivals between 11 A.M. and 2 P.M.?
14. Explain empirical distribution with an example.
15. Explain various simulation software features, characteristics and advantages.

**SECTION-C**

16. What are the major industries where the simulation is used? Explain macro dynamic models in detail.
17. What do you understand by model validation and verification? Explain.
18. Define Simulation Language. Give detailed overview of GPSS.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**

