SUBJECT CODE 8045
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E.(CSE/SOFTWARE) Examination Nov/Dec 2015
Performance Analysis & Simulation
(Revised)

[Time: Three Hours]   [Max. Marks: 80]

"Please check whether you have got the right question paper."
N.B   i) Solve any two questions from each section.
                       ii) Assume suitable data, if necessary and state its clearly.

SECTION-A

Q1. a. Consider the problem of comparing two different congestion control Algorithms for Compute Network.   10
         Briefly describe the systems & List   & Justify.
         i)   Service
         ii)   Performance metrics
         iii)   system parameters
         iv)   Workload parameters
         v)   Factors and their range.

    b.   Define Hardware monitor & software monitors. Discuss the issues in software monitor design.   10

Q2. a. Explain in detail commonly used performance metrics .Give appropriate examples.   10

    b.   With the neat diagram explain the basic structure of a LAN simulator.   10

Q3. a. Explain the different types of test workloads used to compare computer systems.   10

    b.   Compare and Evaluate the operating systems Linux and Windows based on   10

         (i) system Architecture

          (ii) Design

SECTION-B

Q4. a. With a neat diagram explain the steps in simulation study.   10

    b.   List and explain important considerations for random number generators .Also with an appropriate example   10
         explain the test for autocorrelation.

Q5. a. Explain the process of validation and calibration of models.   10

    b.   What is the level of significance ($\propto$) in testing for uniformity?   10

         For the given five numbers ,

         0.44,0.81,0.14,0.05,0.93, perform the test for uniformity using the kolmogorov –smirnov test with $\propto = 0.05$

Q6 a.   Explain in detail the verification of simulation models.   10

    b.   What is a system? Explain different component of a system and state the components for the following   10

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system

      i)   Banking

      ii)   A Hospital Emergency Room