Registration no: | | | | | | | | | | |

Total Number of Pages: 01

M.TECH
EIPC202

2nd Semester Back Examination 2016-17
MODELING AND SIMULATION
BRANCH(S): APPLIED ELECTRONIC & INSTRUMENTATION ENGG, ELECTRONIC & INSTRUMENTATION ENGG
Time: 3 Hours
Max Marks: 70
Q.CODE:Z374
Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** (2 x 10)

a) What do you mean by simulation clock?
b) Distinguish between static and dynamic simulation model with example.
c) Define state of system with an example.
d) Define entity, attribute And activity.
e) What is the significance of Modeling and Simulation?
f) What is Monte Carlo Simulation?
g) What is Flex-sim and Pro-model?
h) Define Strong law of Large number.
i) What is TES process?
j) Define credibility in a Simulation Model.

Q2 a) Drawing a flow chart Showing Steps in a Satisfactory Simulation Study. (5)
b) Write down advantages, disadvantages and pitfalls Of Simulation. (5)

Q3 a) Discuss Arena And Extend. (5)
b) What are the simulation software for manufacturing Application. (5)

Q4 a)Describe any one method of variance reduction Technique (5)
b)Distinguish between pair-t confidence interval And modified 2-sample –t confidence interval. Also write their advantages and disadvantages (5)

Q5 a) Describe Time Share Computer Model. (5)
b) Illustrate a simulation case study of metal parts manufacturing facility. (5)

Q6 a) What is the danger of Probability distribution by its mean? (5)
b) Explain Rejection method for generating continuous random variable. (5)

Q7 a) Differentiate between random number, random variable and random variates. (5)
b) Describe simulation of a single server queuing system. (5)

Q8 **Write short notes (any two)** (5 x 2)

a) Stratified sampling in variance reduction
b) Testing of Random number Generator
c) Linked Storage Allocation
d) Minimum Likelihood Estimator