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Name: .....

Reg.No. .....

EIGHTH SEMESTER B.TECH (ENGINEERING) DEGREE EXAMINATION, JUNE 2011

IT 04 804 E – SIMULATION AND MODELLING (2004 ADMISSIONS)

Time : Three Hours Maximum: 100 Marks

Answer ALL questions

PART – A

I (a) What is a stochastic network. Explain.
(b) What are the parameters of queue
(c) List the features of SIMULA.
(d) Write notes on geometric distribution.
(e) Elaborate on simulation of complete network.
(f) Discuss about generation of service pattern.
(g) Enumerate the special features of SIMSCRIPT.
(h) Brief on the need for system simulation. $(8 \times 5 = 40)$

PART – B

II (a) Explain the simulation of PERT network, its features, merits and demerits. Mention its applications.

(OR)

(b) Write notes on :
(i) Determination of critical path
(ii) Determination of float and slack time.
(iii) Merits of simulation of stochastic networks.

III. (a) Explain in detail the features of GPSS and brief on program considerations.

(OR)

(b) (i) Explain the confidence intervals for terminating simulation runs.
(ii) Compare verification and validation of simulation experiments.

IV (a) Discuss in detail the discrete system simulation methodology. Brief on event scheduling and process interaction approaches.

(OR)

(b) Write notes on :
(i) m-Erlang distribution
(ii) Beta distribution

V (a) Explain in detail the backward pass algorithm.

(OR)

(b) Discuss in detail about simulation of queueing systems, parameters of queues and formulation of queueing problems.

$(4 \times 15 = 60)$

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