

R07
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Code: R7411503

B.Tech IV Year I Semester (R07) Supplementary Examinations, May 2013

**PERFORMANCE EVALUATION OF COMPUTER SYSTEMS**

(Computer Science & Systems Engineering)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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1. (a) Define Bernoulli pmf of a discrete random variable  $x$  and explain its CDF.  
(b) If one in every 1000 of computers produced is defective, determine the probability that a random sample of 8000 will yield fewer than 7 defective computers.
2. Explain briefly about imperfect fault converge and stochastic process models.
3. (a) Explain the notation  $F_y/F_x/m$  to describe the queuing system with example.  
(b) Distinguish between discrete parameter Markov chain and continuous parameter Markov chain.
4. (a) Explain the implementation of SIMD fast Fourier transform.  
(b) Write the sorting algorithm for an array processor.
5. (a) Draw and explain the functional block diagram of iliac IV control unit.  
(b) Explain how BSP is attached to a host processor.
6. (a) Explain the design of a delta network.  
(b) What is bus arbitration? Explain any one algorithm for bus arbitration in multiprocessor organization.
7. Explain various multiprocessor scheduling strategies.
8. (a) Demonstrate the effect of different synchronization mechanisms on the performance of c.mmp  
(b) Describe the functional structure of a computer module in the c.mmp.

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