DISCUSSION EXERCISE

1. Explain the queuing system in simulation.
2. Explain the following queuing system characteristics:
   (a) Calling population
   (b) System capacity
   (c) Arrival process
   (d) Queue behavior and discipline
   (e) Service time and service mechanism
3. Describe Kendal-Lee notation for a queuing system
4. Explain the Inventory System in simulation.
5. Explain with suitable examples : (a) Inter-arrival time (b) Service time (c) Utility Time (d)Idle time of a queuing system
6. With a suitable flow chart describe two server queue system
   (a) A problem on News Paper Sellers.
   (b) A problem on Simulation of a (M,N) inventory system.
   (c) A problem on Single-Channel Queue.
   (d) A problem on Able Bakers carhop.
7. Explain the concept of Discrete-Event Simulation.
8. Explain in detail the event scheduling/time advance algorithm
9. Prepare a simulation table for a single channel queue system until the clock reaches time 20.

   The stopping event will be at time

   Inter-arrival times 4 5 2 8 3 6

   Service times 3 5 4 6 1 5

10. Provide the detailed flow chart of a typical arrival event and a departure event in a single channel queuing system

11. Describe Kendal notation for a queuing system.

12. Define congestion in a queuing system and describe its major characteristics.

13. What is simulation clock? Explain different time advancement mechanism with diagram.

14. What do you understand by queuing system? Describe briefly the characteristics of queuing system with the concept of queuing behaviour and queuing discipline.

15. Define single channel queuing system. What are Kendal notations used in queuing system.

16. What do you mean by Queuing system? What are the long run performance measures in a queuing model? Calculate long run time-average number of customer in the system and long run time-average number of customers in queue with the help of arbitrary example.

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