

Name: \_\_\_\_\_ Hall Ticket No. 

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**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.****I Choose the correct alternative:**

1. Servers may be in [    ]  
(A) parallel                      (B) series                      (C) both (A) & (B)    (D) none of the above
2. If the arrival rate is less than service rate in the system then traffic intensity is [    ]  
(A) greater than 1    (B) less than 1              (C) equal to 1              (D) zero
3. Customer behavior in which he moves from one queue to another in a multiple channel is [    ]  
(A) balking                      (B) reneging                      (C) jockeying                      (D) Synchronising
4. If small orders are placed frequently then total inventory cost is [    ]  
(A) increased              (B) reduced                      (C) both (A) & (B)              (D) constant
5. Economic order quantity is the quantity at which the annual ordering cost is \_\_\_\_\_ to the cost of inventory carrying [    ]  
(A)  $<$                       (B) =                      (C)  $>$                       (D)  $\neq$
6. The maximum of  $x_1^2 + 2x_2^2 + 4x_3^2$  subject to  $x_1 + 2x_2 + x_3 \leq 8$  and  $x_1, x_2, x_3 \geq 0$  is obtained as [    ]  
(A) 64                      (B) 66                      (C) 32                      (D) 16
7. Dynamic programming problem [    ]  
(A) cannot be dealt with nonlinear constraints  
(B) can be solved by simplex method.  
(C) is solved starting from the final stage to its previous till the final stage reached.  
(D) can be dealt with linear constraints
8. The simulation models which do not take variable time into consideration [    ]  
(A) deterministic models    (B) probabilistic models    (C) static models    (D) dynamic models
9. The process of simulation [    ]  
(A) is a power full mathematical technique  
(B) is often referred to as “Monte-Carlo” simulation  
(C) usually require computer to solve the problems.  
(D) involve the criterion where in the output of a simulation model is independent of the simulation run

**Cont.....2**

10. The replacement model of an item that replaces the single item is \_\_\_\_\_ replacement model [     ]  
(A) individual                      (B) group                      (C) both (A) & (B)                      (D) none of the above

**II     Fill in the blanks**

11. The customers are served in the order of their arrival is known as \_\_\_\_\_
12. \_\_\_\_\_ occurs when a waiting customer leaves the queue due to impatience.
13. Getting ticket from ticket counter in any railway station is an example of \_\_\_\_\_ server.
14. Stock replenishment does not occur neither \_\_\_\_\_ nor uniformly.
15. The most economic point exist where inventory carrying costs is \_\_\_\_\_ to annual ordering cost.
16. Dynamic programming problem is concerned with the theory of \_\_\_\_\_ decision process.
17. The number of \_\_\_\_\_ in an LPP is not equal to number of state variables in the Dynamic programming problem.
18. One approach to solve a given Dynamic programming problem is \_\_\_\_\_ equation approach.
19. Simulation generates a way of evaluating solutions but it does not generate the \_\_\_\_\_
20. Simulation is based on the use of \_\_\_\_\_

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2. Economic order quantity is the quantity at which the annual ordering cost is \_\_\_\_\_ to the cost of inventory carrying [     ]  
(A) <      (B) =      (C) >      (D) ≠
3. The maximum of  $x_1^2 + 2x_2^2 + 4x_3^2$  subject to  $x_1 + 2x_2 + x_3 \leq 8$  and  $x_1, x_2, x_3 \geq 0$  is obtained as [     ]  
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**Cont.....2**

10. Customer behavior in which he moves from one queue to another in a multiple channel is [      ]  
(A) balking                      (B) reneging                      (C) jockeying                      (D) Synchronising

**II Fill in the blanks**

11. Stock replenishment does not occur neither \_\_\_\_\_ nor uniformly.
12. The most economic point exist where inventory carrying costs is \_\_\_\_\_ to annual ordering cost.
13. Dynamic programming problem is concerned with the theory of \_\_\_\_\_ decision process.
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(A) < (B) = (C) > (D) ≠

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