1711E1293

Candidate's Seat No : _____

M.Sc. Sem.-3 Examination

504

Statistics

November-2025

Time : 2-30 Hours] **[Max. Marks : 70**

Q-1 (A): Explain the instantaneous demand inventory control model without set up cost. **[07]**

Q-1 (B): Explain inventory control model with reorder lead time without set up cost and probabilistic approach. **[07]**

=OR=

Q-1 (A): Explain inventory model building. Explain stepwise. **[07]**

Q-1 (B): State the limitations of EOQ model. **[07]**

Q-2 (A): State and prove Mortality Theorem. **[07]**

Q-2 (B): Explain the phenomenon of equipment renewal problem. **[07]**

=OR=

Q-2 (A): Explain staffing process in detail. **[07]**

Q-2 (B): Explain individual replacement policy and group replacement policy in detail. **[07]**

Q-3 (A): Explain project control phase with the help of a suitable chart. **[07]**

Q-3 (B): Define Resource Smoothing. State the steps of resource smoothing process. **[07]**

=OR=

Q-3 (A): Explain time cost trade off procedure stepwise. Also explain project crashing with the help of a suitable diagram. **[07]**

Q-3 (B): Explain "max flow min cut" theorem. **[07]**

Q-4 (A): Explain the steps of simulation with the help of a suitable chart. **[07]**

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Q-4 (B): State the types of simulation. Also explain what it is and what it is not. **[07]**

=OR=

Q-4 (A): Explain Wolfe's method for solving a non linear programming problem. **[07]**

Q-4 (B): State the steps of separable programming stepwise. **[07]**

Q-5: Answer in short: (any 7) **[14]**

1. State any two differences between PERT and CPM.
2. State any two advantages of staffing procedure.
3. Explain sudden failure with suitable example.
4. Explain gradual failure with suitable example.
5. Define quadratic problem and state any one application of it.
6. State any two Kuhn Tucker's conditions.
7. Define Separable Programming and give an example of it.
8. Explain Earliest Starting Time and Earliest Finishing Time.
9. Explain Latest Starting Time and Latest Finishing Time.
10. Explain Demand Rate and Replenishment Rate
11. Define order cycle and EOQ.
12. Explain Buffer Inventories with suitable example.

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