

QUESTION 14

1. The graphical method of solving linear programming can be used to solve problems with....variable(s)
 - A. One
 - B. Two
 - C. Three
 - D. Many

2. A minimization problem of a linear programming uses one of the following symbols
 - A. \leq
 - B. $>$
 - C. \geq
 - D. $<$

3. The constraint that has reached its limit at the optimal solution in a linear programming problem is called.....constraint
 - A. Binding
 - B. Dual
 - C. Feasible
 - D. Optimum

4. A backward pass through a network is used to obtain theof each activity
 - A. Earliest Start time
 - B. Late Finish Time
 - C. Float time
 - D. Cost slope

5. A forward pass through a network is used to obtain theof each activity
 - A. Earliest Start time
 - B. Late Completion Time
 - C. Float
 - D. Cost slope

6. With respect to CPM, an event
 - A. marks the start or completion of a task
 - B. is a task or subproject that must be completed
 - C. is the amount of time a task may be delayed without affecting any other task in the network
 - D. is the amount of time a task may be delayed without changing the overall project completion time

7. The quantity of the replenishment order of the periodic review policy is dependent on three factors. These are
 - A. Demand, Lead time and EOQ
 - B. Lead time. Demand and Stock level.
 - C. EOQ, Demand and Re-order level
 - D. Demand, Stock level and EOQ**

8. With respect to CPM, slack(float) of an activity
 - A. marks the start or completion of a task
 - B. is a task or subproject that must be completed

- C. is the amount of time a task may be delayed without affecting any other task in the network
 D. is the amount of time a task may be delayed without changing the overall project completion time**
9. A dummy activity is required when the network contains
 A. two or more activities have the same starting events
 B. two or more activities have the same ending events
 C. two or more activities have different ending events
 D. two or more activities have same starting and ending events
10. The critical path of a network is the
 A. path with the most activities
 B. shortest time path through the network
 C. the network path with the fewest activities
 D. longest time path through the network
11. Crashing is the term used when
 A. the cost of a project has to be reduced
 B. the project time has to be reduced at a minimum cost
 C. the project time has to be reduced at a maximum cost
 D. insufficient resources are available for the completion of the project
12. Unbalanced transportation problem is balanced by introducing... variable
 A. slack
 B. dummy**
 C. sloat
 D. shadow
13. One of the following is a tool for organizing and planning large scale project.
 A. Linear Programming
 B. Queuing Model
 C. Network Analysis
 D. Inventory Control
14. Which of the following factors played a major role in the rapid growth and use of Operations Research?
 A. Computer Revolution
 B. Industrial Revolution
 C. World War I
 D. World War II
15. Which of the following best describes Operations Research?
 A. Using computers to solve problems
 B. Scientific use of computers in research
 C. Research on organizations' resources
 D. Scientific approach to decision making
16. The roots of operations Research can be traced as far back during the activities during...
 A. Computer Revolution

- B. Industrial Revolution
 - C. The Stone Age
 - D. World War II
17. Which of the following best describes Linear Programming
- A. Computer Programming
 - B. Planning with models
 - C. Solving problems with graphs
 - D. Programming to maximize profit
18. The main objective of transportation problem is to distribute goods in such a as to
- A. maximize profit
 - B. minimize cost
 - C. reallocate resources
 - D. satisfy consumers
19. Operations managers use Linear programming to...
- A. produce goods at a minimum cost
 - B. allocate very important resources
 - C. maximize consumers satisfaction
 - D. allocate scarce resources
20. The principle of the few having the greatest importance and the many having little importance in ABC inventory classification is attributed to
- A.
 - B.
 - C.
 - D.
20. A Linear Programming problem with more than two variables can be solved using.. method
- A. graphical
 - B. Lagrangian
 - C. Simplex
 - D. assignment
21. For optimization subject to a single inequality constraint, the ...method is relatively simpler
- A. Graphical
 - B. Lagrangian
 - C. Simplex

D. Assignment

22. Which of the following times is NOT a requirement for Project Evaluation Review Technique (PERT) analysis?
- A. Optimistic
 - B. Deterministic
 - C. Pessimistic
 - D. Realistic
23. The three phases involved in the management of large projects are
- A. planning, scheduling, evaluating
 - B. scheduling, operating, evaluating
 - C. scheduling, Designing, operating
 - D. planning, scheduling, controlling.
24. PERT analysis computes the variances of the total project completion time as the sum of the variances of all
- A. activities in the project
 - B. activities on the critical path
 - C. activities not on the critical path
 - D. final activity of the project
25. With transportation technique, the initial solution can be generated in any fashion one chooses. The only restriction is that
- A. the solution is soluble
 - B. the solution must be optimal
 - C. one uses the least cost first rule
 - D. the edge constraints are satisfied
26. The purpose of a dummy source or destination in a transportation problem is to
- A. provide a means of representing a dummy problem
 - B. obtain a balance between total supply and demand
 - C. prevent the solution from becoming insoluble
 - D. make certain that the total cost does not exceed specified figures
27. The ABC analysis divides on-hand inventory into three classes based on
- A. unit price
 - B. annual demand
 - C. annual dollar value
 - D. number of units on hand
28. Extra units held in inventory to reduce stock are called
- A. reorder point
 - B. safety stock
 - C. just-in-time inventory
 - D. Economic order quantity
29. The two most important inventory-based questions answered by the typical inventory model are
- A. when to place an order and what is the cost of the order
 - B. when to place order and how many of an item to order
 - C. how many of an item to order and what is the cost of the order

D. how many of an item to order and with whom should the order be placed

30. When using a graphical procedure, the area bounded by the set of constraints is called

- A. Initial solution
- B. Feasible region
- C. Maximum profit region
- D. Optimum solution

31. Which of the following is NOT a property of linear programming problems?

- A. the presence of restrictions
- B. Optimization of some objectives
- C. Computer programme
- D. Alternate course of action to choose from
- E. Usage of only linear equations and inequalities.

32. Most systems use the queue discipline known as first-in, first-out rule.

True
False

33. Before using exponential distributions to build queuing models, the operations analyst should determine if the service time data fit the distribution.

True
False

34. In a multichannel, single-phase queuing system, the arrival will pass through at least two different service facilities.

True
False

35. Which of the following is *not* an assumption in common queuing mathematical models?

- arrivals come from an infinite, or very large population
- arrivals are Poisson distributed
- arrivals are treated on a first-in, first-out basis and do not balk or renege
- service times follow the exponential distribution
- the average arrival rate is faster than the average service rate

36. Which of the following is *not* a key operating characteristic for a queuing system?

- utilization rate
- percent idle time
- average time spent waiting in the system and in the queue
- average number of customers in the system and in the queue

37. Three parts of a queuing system are

the inputs, the queue, and the service facility

the calling population, the queue, and the service facility

the calling population, the waiting line, and the service facility