Operations Research

1. Operations Research approach is _____.

A. multi-disciplinary
B. scientific
C. intuitive
D. collect essential data

View answer

Correct answer: (A)
multi-disciplinary

2. A feasible solution to a linear programming problem _____.

A. must satisfy all the constraints of the problem simultaneously
B. need not satisfy all of the constraints, only some of them
C. must be a corner point of the feasible region.
D. must optimize the value of the objective function

View answer

Correct answer: (A)
must satisfy all the constraints of the problem simultaneously

3. If any value in XB column of final simplex table is negative, then the solution is _____.

A. infeasible
B. infeasible
C. bounded
D. no solution

View answer

Correct answer: (B)
infeasible

4. For any primal problem and its dual_____.

A. optimal value of objective function is same
B. dual will have an optimal solution iff primal does too
C. primal will have an optimal solution iff dual does too
D. both primal and dual cannot be infeasible

View answer

Correct answer: (C)
primal will have an optimal solution iff dual does too

5. The difference between total float and head event slack is _____

A. free float
B. independent float
C. interference float
D. linear float

View answer

Correct answer: (A)
free float

6. An optimal assignment requires that the maximum number of lines which can be drawn through squares with zero opportunity cost should be equal to the number of _____.

A. rows or columns
B. rows and columns.
C. rows+columns- 1
D. rows-columns.

View answer

Correct answer: (A)
rows or columns

7. To proceed with the Modified Distribution method algorithm for solving an transportation problem, the number of dummy allocations need to be added are_____.

A. n
B. n-1
C. 2n-1
D. n-2

View answer

Correct answer: (B)
n-1

8. Select the correct statement

A. EOQ is that quantity at which price paid by the buyer is minimum
B. If annual demand doubles with all other parameters remaining constant, the Economic Order Quantity is doubled
C. Total ordering cost equals holding cost
D. Stock out cost is never permitted

View answer

Correct answer: (C)
Total ordering cost equals holding cost

9. Service mechanism in a queuing system is characterized by _____.

A. customers behavior
B. servers behavior
C. customers in the system
D. server in the system

View answer

Correct answer: (B)
servers behavior

10. The objective of network analysis is to_____.

A. minimize total project duration
B. minimize toal project cost
C. minimize production delays, interruption and conflicts
D. maximize total project duration

View answer

Correct answer: (A)
minimize total project duration

Previous

Page 1 of 22

Next

Operations Research

11. In program evaluation review technique network each activity time assume a beta distribution because_____.

A. it is a unimodal distribution that provides information regarding the uncertainty of time estimates of activities
B. it has got finite non-negative error
C. it need not be symmetrical about model value
D. the project is progressing well

View answer

Correct answer: (A)
it is a unimodal distribution that provides information regarding the uncertainty of time estimates of activities

12. If there is no non-negative replacement ratio in solving a Linear Programming Problem then the solution is _____.

A. feasible
B. bounded
C. unbounded
D. infinite

View answer

Correct answer: (C)
unbounded

13. The calling population is considered to be infinite when _____.

A. all customers arrive at once
B. capacity of the system is infinite
C. service rate is faster than arrival rate
D. arrivals are independent of each other

View answer

Correct answer: (B)
capacity of the system is infinite

14. In marking assignments, which of the following should be preferred?

A. Only row having single zero
B. Only column having single zero
C. Only row/column having single zero
D. Column having more than one zero

View answer

Correct answer: (C)
Only row/column having single zero

15. A petrol pump have one pump; Vehicles arrive at the petrol pump according to poison input process at average of 12 per hour. The service time follows exponential distribution with a mean of 4 minutes. The pumps are expected to be idle for _____.

A. 3/5
B. 4/5
C. 5/3
D. 6/5

View answer

Correct answer: (B)
4/5

16. If the order quantity (size of order) is increased, _____

A. holding costs decrease and ordering costs increase

B. holding costs increase and ordering costs decrease

C. the total costs increase and then decrease

D. storage cost as well as stock-out cost increase

View answer

Correct answer: (B)
holding costs increase and ordering costs decrease

17. _____ is a mathematical technique used to solve the problem of allocating limited resource among the competing activities

A. Linear Programming problem

B. Assignment Problem

C. Replacement Problem

D. Non linear Programming Problem

View answer

Correct answer: (A)
Linear Programming problem

18. A mixed strategy game can be solved by _____.

A. Simplex method

B. Hungarian method

C. Graphical method

D. Degeneracy

View answer

Correct answer: (C)
Graphical method

19. The activity cost corresponding to the crash time is called the _____.

A. critical time

B. normal time

C. cost slope

D. crash cost

View answer

Correct answer: (D)
crash cost

20. A set of feasible solution to a Linear Programming Problem is _____

A. convex

B. polygon

C. triangle

D. bold

View answer

Correct answer: (A)
convex

Previous

Page 2 of 22

Next

Operations Research

21. In an Linear Programming Problem functions to be maximized or minimized are called _____.

A. constraints
B. objective function
C. basic solution
D. feasible solution

View answer

Correct answer: (B)
objective function

22. If the primal problem has n constraints and m variables then the number of constraints in the dual problem is _____.

A. mn
B. m+n
C. m-n
D. m/n

View answer

Correct answer: (A)
mn

23. The non basic variables are called _____.

A. shadow cost
B. opportunity cost
C. slack variable
D. surplus variable

View answer

Correct answer: (A)
shadow cost

24. Key element is also known as _____.

A. slack
B. surplus
C. artificial
D. pivot

View answer

Correct answer: (D)
pivot

25. The solution to a transportation problem with m-sources and n-destinations is feasible if the numbers of allocations are _____.

A. m+n
B. mn
C. m-n
D. m+n-1

View answer

Correct answer: (D)
m+n-1

26. The allocation cells in the transportation table will be called _____ cell

A. occupied
B. unoccupied
C. no
D. finite

View answer

Correct answer: (A)
occupied

27. To resolve degeneracy at the initial solution, a very small quantity is allocated in _____ cell

A. occupied
B. unoccupied
C. no
D. finite

View answer

Correct answer: (B)
unoccupied

28. The assignment algorithm was developed by _____ method.

A. HUNGARIAN
B. VOGELS
C. MODI
D. TRAVELING SALES MAN

View answer

Correct answer: (A)
HUNGARIAN

29. An assignment problem is a particular case of _____.

A. transportation Problem
B. assignment Problem
C. travelling salesman problem
D. replacement Problem

View answer

Correct answer: (A)
transportation Problem

30. The coefficient of slack\surplus variables in the objective function are always assumed to be _____.

A. 0
B. 1
C. M
D. -M

View answer

Correct answer: (A)
0

Previous

Page 3 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Home > Operations Research > Page 4

Operations Research

31. Using _____ method, we can never have an unbounded solution

A. Simplex
B. Dual simplex
C. Big M
D. Modi

View answer

Correct answer: (B)
Dual simplex

32. The customers of high priority are given service over the low priority customers is _____.

A. Pre emptive
B. FIFO
C. LIFO
D. SIRO

View answer

Correct answer: (A)
Pre emptive

33. A queuing system is said to be a _____ when its operating characteristic are independent upon time

A. pure birth model
B. pure death model
C. transient state
D. steady state

View answer

Correct answer: (D)
steady state

34. An activity which does not consume neither any resource nor time is known as _____.

A. predecessor activity
B. successor activity
C. dummy activity
D. activity

View answer

Correct answer: (C)
dummy activity

35. The difference between total and free float is _____.

A. total
B. free
C. independent
D. interference

View answer

Correct answer: (D)
interference

36. The number of time estimates involved in Program Evaluation Review Technique problem is _____.

A. 1

B. 2

C. 3

D. 4

View answer

Correct answer: (C)
3

37. The assignment problem is always a _____matrix.

A. circle

B. square

C. rectangle

D. triangle

View answer

Correct answer: (B)
square

38. The slack variables indicate _____.

A. excess resource available.

B. shortage of resource

C. nil resource

D. idle resource

View answer

Correct answer: (D)
idle resource

39. If the net evaluation corresponding to any non -basic variable is zero, it is an indication of the existence of an _____.

A. initial basic feasible solution

B. optimum basic feasible solution

C. optimum solution.

D. alternate optimum solution.

View answer

Correct answer: (D)
alternate optimum solution.

40. Mathematical model of linear programming problem is important because _____.

A. it helps in converting the verbal description and numerical data into mathematical expression

B. decision makers prefer to work with formal models

C. it captures the relevant relationship among decision factors

D. it enables the use of algebraic technique

View answer

Correct answer: (A)

it helps in converting the verbal description and numerical data into mathematical expression

Previous

Page 4 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Operations Research

41. While solving a linear programming problem infeasibility may be removed by _____.

A. adding another constraint
B. adding another variable
C. removing a constraint
D. removing a variable

View answer

Correct answer: (C)
removing a constraint

42. The right hand side constant of a constraint in a primal problem appears in the corresponding dual as_____.

A. a coefficient in the objective function
B. a right hand side constant of a function
C. an input output coefficient a left hand side constraint
D. coefficient variable

View answer

Correct answer: (A)
a coefficient in the objective function

43. During iteration while moving from one solution to the next, degeneracy may occur when_____

A. the closed path indicates a diagonal move
B. two or more occupied cells are on the closed path but neither of them represents a corner of the path.
C. two or more occupied cells on the closed path with minus sign are tied for lowest circled value.
D. the closed path indicates a rectangle move.

View answer

Correct answer: (C)
two or more occupied cells on the closed path with minus sign are tied for lowest circled value.

44. Maximization assignment problem is transformed into a minimization problem by_____.

A. adding each entry in a column from the maximum value in that column
B. subtracting each entry in a column from the maximum value in that column
C. subtracting each entry in the table from the maximum value in that table
D. adding each entry in the table from the maximum value in that table

View answer

Correct answer: (C)
subtracting each entry in the table from the maximum value in that table

45. Priority queue discipline may be classified as_____.

A. pre-emptive or non-pre-emptive
B. limited
C. unlimited
D. finite

View answer

Correct answer: (C)
unlimited

46. Replace an item when_____.

A. average cost upto date is equal to the current maintenance cost
B. average cost upto date is greater than the current maintenance cost
C. average cost upto date is less than the current maintenance cost.
D. next year running cost in more than average cost of nth year

View answer

Correct answer: (A)
average cost upto date is equal to the current maintenance cost

47. In time cost trade off function analysis_____.

A. cost decreases linearly as time increases
B. cost increases linearly as time decreases
C. cost at normal time is zero
D. cost increases linearly as time increases

View answer

Correct answer: (A)
cost decreases linearly as time increases

48. The transportation problem deals with the transportation of _____.

A. a single product from a source to several destinations
B. a single product from several sources to several destinations
C. a single product from several sources to a destination
D. a multi -product from several sources to several destinations

View answer

Correct answer: (A)
a single product from a source to several destinations

49. The minimum number of lines covering all zeros in a reduced cost matrix of order n can be _____.

A. at the most n
B. at the least n
C. n-1
D. n+1

View answer

Correct answer: (A)
at the most n

50. For a 2.5% increase in order quantity (under fundamental EOQ problem) the total relevant cost would _____

A. increase by 2.5%.
B. decrease by 2.5%.
C. increase by 0.25%.
D. decrease by 0.25%.

View answer

Correct answer: (A)

increase by 2.5%.

Previous

Page 5 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Home > Operations Research > Page 6

Operations Research

51. In the basic EOQ model, if the lead time increases from 2 to 4 days, the EOQ will _____

A. double increase
B. remain constant
C. but not double
D. decrease by a factor of two

View answer

Correct answer: (B)
remain constant

52. When the sum of gains of one player is equal to the sum of losses to another player in a game, this situation is known as _____.

A. two-person game
B. two-person zero-sum game
C. zero-sum game
D. non-zero-sum game

View answer

Correct answer: (C)
zero-sum game

53. In the network, one activity may connect any _____ nodes

A. 1
B. 2
C. 3
D. 4

View answer

Correct answer: (B)
2

54. Graphical method is also known as _____.

A. Simplex Method
B. Dual Simplex Method
C. Big-M Method
D. Search-Approach Method

View answer

Correct answer: (D)
Search-Approach Method

55. If the given Linear Programming Problem is in its standard form then primal-dual pair is _____.

A. symmetric
B. un symmetric
C. square
D. triangle

View answer

Correct answer: (B)
un symmetric

56. The method used to solve Linear Programming Problem without use of the artificial variable is called _____.

A. Simplex Method
B. Big-M Method
C. Dual Simplex Method
D. Graphical Mehtod

View answer

Correct answer: (C)
Dual Simplex Method

57. When the total demand is equal to supply then the transportation problem is said to be _____

A. balanced
B. unbalanced
C. maximization
D. minimization

View answer

Correct answer: (A)
balanced

58. For finding an optimum solution in transportation problem _____ method is used.

A. Simplex
B. Big-M
C. Modi
D. Hungarian

View answer

Correct answer: (C)
Modi

59. Linear Programming Problem is a technique of finding the _____.

A. optimal value
B. approximate value
C. initial value
D. infeasible value

View answer

Correct answer: (A)
optimal value

60. Any solution to a Linear Programming Problem which also satisfies the non- negative notifications of the problem has _____.

A. solution
B. basic solution
C. basic feasible solution
D. feasible solution

View answer

Correct answer: (D)
feasible solution

Previous

Page 6 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Home > Operations Research > Page 7

Operations Research

61. Customers arrive at a box office window, being manned ny single individual, according to Poisson input process with mean rate of 20 per hour, while the mean service time is 2 minutes. Which of the following is not true for this system?

A. E(n) = 2 customers
B. E(m) = 4/3 customers
C. E(v) = 6 minutes
D. E(w) = 16 minutes

View answer

Correct answer: (A)
E(n) = 2 customers

62. A game is said to be strictly determinable if_____.

A. maximin value equal to minimax value
B. maximin value is less than or equal to minimax value
C. maximin value is greater than or equal to minimax value
D. maximin value is not equal to minimax value

View answer

Correct answer: (A)
maximin value equal to minimax value

63. The irreducible minimum duration of the project is called _____.

A. critical time
B. normal time
C. cost slope
D. crash duration

View answer

Correct answer: (D)
crash duration

64. The cost of a slack variable is _____.

A. 0
B. 1
C. 2
D. -1

View answer

Correct answer: (A)
0

65. Linear Programming Problem that can be solved by graphical method has _____.

A. linear constraints
B. quadratic constraints
C. non linear constraints
D. bi-quadratic constraints

View answer

Correct answer: (A)
linear constraints

66. If one or more variable vanish then a basic solution to the system is called _____.

A. non feasible region
B. feasible region
C. degenerate solution
D. basic solution

View answer

Correct answer: (C)
degenerate solution

67. _____ method is an alternative method of solving a Linear Programming Problem involving artificial variables

A. Simplex Method
B. Big-M Method
C. Dual Simplex Method
D. Graphical Mehtod

View answer

Correct answer: (B)
Big-M Method

68. The server utilization factor is also known as _____

A. erlang distribution
B. poisson distribution
C. exponential distribution
D. traffic intensity

View answer

Correct answer: (D)
traffic intensity

69. In a transportation table, an ordered set of_____ or more cells is said to form a loop

A. 2
B. 3
C. 4
D. 5

View answer

Correct answer: (C)
4

70. A Linear Programming Problem have _____ optimal solution

A. 1
B. 2
C. more than 1
D. more than 2

View answer

Correct answer: (C)
more than 1

Previous

Page 7 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Operations Research

71. An n-tuple of real numbers which satisfies the constraints of Linear Programming Problem is called _____

A. solution
B. basic solution
C. basic feasible solution
D. feasible solution

View answer

Correct answer: (A)
solution

72. Chose the correct statement: A degenerate solution is one that_____.

A. gives an optimum solution to the Linear Programming Problem
B. gives zero value to one or more of the basic variables
C. yields more than one way to achieve the objective
D. makes use of all available resources

View answer

Correct answer: (B)
gives zero value to one or more of the basic variables

73. At any iteration of the usual simplex method, if there is at least one basic variable in the basis at zero level and all the index numbers are non-negative, the current solution is _____.

A. basic solution
B. non basic solution
C. degenerate
D. non degenerate

View answer

Correct answer: (C)
degenerate

74. The model in which only arrivals are counted and no departure takes place are called _____.

A. pure birth model
B. pure death model
C. birth death model
D. death birth model

View answer

Correct answer: (A)
pure birth model

75. _____ of a queuing system is the state where the probability of the number of customers in the system depends upon time

A. pure birth model
B. pure death model
C. transient state
D. steady state

View answer

Correct answer: (D)
steady state

76. The initial event which has all outgoing arrows with no incoming arrow is numbered _____.

A. 0

B. 1

C. -1

D. 2

View answer

Correct answer: (A)
0

77. In a network diagram an event is denoted by the symbol _____.

A. arrow

B. straight line

C. curve

D. circle

View answer

Correct answer: (D)
circle

78. An _____ represent the start or completion of some activity and as such it consumes no time

A. activity

B. event

C. slack

D. path

View answer

Correct answer: (B)
event

79. _____ is used for non-repetitive jobs

A. Queue

B. Replacement

C. CPM

D. PERT

View answer

Correct answer: (C)
CPM

80. The assignment problem will have alternate solutions when the total opportunity cost matrix has _____

A. atleast one zero in each row and column

B. when all rows have two zeros

C. when there is a tie between zero opportunity cost cells

D. if two diagonal elements are zeros.

View answer

Correct answer: (C)
when there is a tie between zero opportunity cost cells

Previous

Page 8 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Operations Research

81. The region common to all the constraints including the non-negativity restrictions is called the _____.

A. solution space
B. unique solution
C. optimum solution
D. infeasible solution

View answer

Correct answer: (A)
solution space

82. A activity in a network diagram is said to be _____ if the delay in its start will further delay the project completion time.

A. forward pass
B. backward pass
C. critical.
D. non-critical.

View answer

Correct answer: (C)
critical

83. Operation research approach is typically based on the use of _____.

A. physical model.
B. mathematical model.
C. iconic model.
D. descriptive model.

View answer

Correct answer: (B)
mathematical model.

84. An Iso-profit line represents _____.

A. a boundary of the feasible region
B. an infinite number of solution all of which yield the same cost
C. an infinite number of solutions all of which yield the same profit
D. an infinite number of optimal solutions

View answer

Correct answer: (C)
an infinite number of solutions all of which yield the same profit

85. If an artificial variable is present in the basic variable column of optimal simplex table, then the problem has _____ solution.

A. alternative
B. no solution
C. bounded
D. infeasible

View answer

Correct answer: (D)
infeasible

86. The dummy source or destination in a transportation problem is added to _____.

A. satisfy rim conditions

B. prevent solution from becoming degenerate

C. ensure that total cost does not exceed a limit

D. the solution not be degenerate

View answer

Correct answer: (A)
satisfy rim conditions

87. Which of the following methods is used to verify the optimality of the current solution of the transportation problem_____.

A. Least cost method

B. Vogel's Approximation method

C. Row minima method

D. Modified Distribution method

View answer

Correct answer: (D)
Modified Distribution method

88. For a salesman who has to visit n cities, following are the ways of his tour plan _____.

A. n!

B. (n+a)!

C. (n-a)!

D. n

View answer

Correct answer: (C)
(n-a)!

89. Economic order quantity results in _____

A. equalisation of carrying cost and procurement cost

B. favourable procurement price

C. reduced chances of stock outs

D. minimization of set up cost

View answer

Correct answer: (A)
equalisation of carrying cost and procurement cost

90. The problem of replacement is felt when job performing units fail _____.

A. suddenly and gradually

B. gradually

C. suddenly

D. neither gradually nor suddenly

View answer

Correct answer: (A)
suddenly and gradually

Previous

Page 9 of 22

Next

Operations Research

91. Float analysis is useful for _____.

A. total float
B. free float
C. independent float
D. variance of each float

View answer

Correct answer: (B)
free float

92. The difference between free float and tail event slack is _____

A. total float
B. independent float
C. interference float
D. slack

View answer

Correct answer: (B)
independent float

93. The assignment problem is a special case of transportation problem in which _____.

A. number of origins are less than the number of destinations
B. number of origins are greater than the number of destinations
C. number of origins are greater than or equal to the number of destinations
D. number of origins equals the number of destinations

View answer

Correct answer: (D)
number of origins equals the number of destinations

94. The average arrival rate in a single server queuing system is 10 customers per hour and average service rate is 15 customers per hour. The average time that a customer must wait before it is taken up for service shall be _____minutes.

A. 6
B. 8
C. 10
D. 12

View answer

Correct answer: (B)
8

95. The time between the placement of an order and its delivery is called as _____

A. buffer time
B. lead time
C. Economic Order Quantity
D. capital time

View answer

Correct answer: (B)
lead time

96. In Program Evaluation Review Technique the maximum time that is required to perform the activity under extremely bad conditions is known as _____.

A. normal time
B. optimistic time
C. most likely time
D. pessimistic time

View answer

Correct answer: (D)
pessimistic time

97. All of the following may be used to find the EOQ except _____.

A. optimal number of days supply to order
B. number of orders which minimize ordering costs optimal
C. number of rupees per order optimal
D. number of orders per year

View answer

Correct answer: (D)
number of orders per year

98. A feasible solution of an Linear Programming Problem that optimizes the objective function is called _____

A. basic feasible solution
B. optimum solution
C. feasible solution
D. solution

View answer

Correct answer: (B)
optimum solution

99. Charnes method of penalty is called _____

A. Simplex Method
B. Dual Simplex Method
C. Big-M Method
D. Graphical Method

View answer

Correct answer: (C)
Big-M Method

100. If the given Linear Programming Problem is in its canonical form then primal-dual pair is _____.

A. symmetric
B. un symmetric
C. square
D. non square

View answer

Correct answer: (B)
un symmetric

Previous

Page 10 of 22

Next

Operations Research

101. All the basis for a transportation problem is _____.

A. square
B. rectangle
C. diagonal
D. triangle

View answer

Correct answer: (D)
triangle

102. In the transportation table, empty cells will be called _____.

A. occupied
B. unoccupied
C. no
D. finite

View answer

Correct answer: (B)
unoccupied

103. _____ is a completely degenerate form of a transportation problem

A. Transportation Problem
B. Assignment Problem
C. Travelling salesman problem
D. Replacement Problem

View answer

Correct answer: (B)
Assignment Problem

104. The linear function to be maximized or minimized is called _____ function.

A. injective
B. surjective
C. bijective
D. optimal

View answer

Correct answer: (D)
optimal

105. The coefficient of an artificial variable in the objective function of penalty method are always assumed to be _____.

A. 0
B. 1
C. M
D. -M

View answer

Correct answer: (D)
-M

106. The process that performs the services to the customer is known as _____.

A. queue
B. service channel
C. customers
D. server

View answer

Correct answer: (B)
service channel

107. A queuing system is said to be a _____ when its operating characteristic are dependent upon time

A. pure birth model
B. pure death model
C. transient state
D. steady state

View answer

Correct answer: (C)
transient state

108. Slack is also known as _____.

A. float
B. event
C. activity
D. path

View answer

Correct answer: (A)
float

109. What type of distribution does a time follow in program evaluation review technique model?

A. Poisson
B. Exponential
C. Normal
D. Chi Square

View answer

Correct answer: (C)
Normal

110. A activity in a network diagram is said to be _____ if the delay in its start will further delay the project completion time.

A. critical
B. critical path
C. crash
D. non critical

View answer

Correct answer: (A)
critical

Previous

Page 11 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Operations Research

111. The total opportunity cost matrix is obtained by doing _____.

A. row operation on row opportunity cost matrix
B. column operation on row opportunity cost matrix
C. column operation on column opportunity cost matrix
D. none of the above.

View answer

Correct answer: (B)
column operation on row opportunity cost matrix

112. The simplex method is also called the _____.

A. dual simplex method.
B. Modi method
C. simplex technique
D. Big-M method

View answer

Correct answer: (C)
simplex technique

113. A degenerate solution is one that _____.

A. gives an optimum solution to the Linear Programming Problem
B. gives zero value to one or more of the basic variables
C. yields more than one way to achieve the objective
D. makes use of all the available resources

View answer

Correct answer: (B)
gives zero value to one or more of the basic variables

114. Graphical method of linear programming is useful when the number of decision variable are _____.

A. 1
B. 2
C. 3
D. 4

View answer

Correct answer: (B)
2

115. In the optimal simplex table, Zj-Cj=0 value indicates _____.

A. alternative solution
B. bounded solution
C. infeasible solution
D. unbounded solution

View answer

Correct answer: (A)
alternative solution

116. If primal linear programming problem has a finite solution, then dual linear programming problem should _____.

A. have optimal solution
B. satisfy the Rim condition
C. have degenerate solution
D. have non-degenerate solution

View answer

Correct answer: (B)
satisfy the Rim condition

117. While solving an assignment problem, an activity is assigned to a resource through a square with zero opportunity cost because the objective is to_____.

A. minimize total cost of assignment.
B. reduce the cost of assignment to zero
C. reduce the cost of that particular assignment to zero
D. reduce total cost of assignment

View answer

Correct answer: (A)
minimize total cost of assignment.

118. If the procurement cost used in the formula to compute EOQ is half of the actual procurement cost, the EOQ so obtained will be _____

A. half of EOQ
B. one third of EOQ
C. one fourth of EOQ
D. 0.707 time EOQ

View answer

Correct answer: (D)
0.707 time EOQ

119. The calling population is assumed to be infinite when _____.

A. capacity of the system is infinite
B. arrivals are independent of each other
C. service rate is faster than arrival rate
D. all customers arrive at once

View answer

Correct answer: (B)
arrivals are independent of each other

120. If an activity has zero slack, it implies that_____.

A. the project is progressing well
B. it is a dummy activity
C. it lies on the critical path
D. it lies a non critical path

View answer

Correct answer: (C)
it lies on the critical path

Previous

Page 12 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Operations Research

121. The transportation problem is balanced, if _____.

A. total demand and total supply are equal and the number of sources equals the number of destinations.
B. none of the routes is prohibited
C. total demand equals total supply irrespective of the number of sources and destinations
D. number of sources matches with number of destinations

View answer

Correct answer: (C)
total demand equals total supply irrespective of the number of sources and destinations

122. In an assignment problem involving 5 workers and 5 jobs, total number of assignments possible are _____.

A. 5
B. 10
C. 15
D. 20

View answer

Correct answer: (A)
5

123. All of the following are assumptions of the EOQ model except _____

A. the usage rate is reasonably constant
B. replenishment is not instantaneous
C. only one product is involved
D. there are no quantity discount price

View answer

Correct answer: (B)
replenishment is not instantaneous

124. Average number of trains spent in the yard is denoted by _____.

A. E(n)
B. E(m)
C. E(v)
D. E(w)

View answer

Correct answer: (C)
E(v)

125. Graphical method of linear programming is useful when the number of decision variable are _____

A. 2
B. 3
C. 4
D. 5

View answer

Correct answer: (A)
2

126. The cost of a surplus variable is _____.

A. 0

B. 1

C. 2

D. -1

View answer

Correct answer: (A)
0

127. The dual of the dual is _____.

A. dual-primal

B. primal-dual

C. dual

D. primal

View answer

Correct answer: (D)
primal

128. Solution of a Linear Programming Problem when permitted to be infinitely large is called _____.

A. unbounded

B. bounded

C. optimum solution

D. no solution

View answer

Correct answer: (C)
optimum solution

129. When the total demand is not equal to supply then it is said to be _____.

A. balanced

B. unbalanced

C. maximization

D. minimization

View answer

Correct answer: (B)
unbalanced

130. All equality constraints can be replaced equivalently by _____ inequalities

A. 1

B. 2

C. 3

D. 4

View answer

Correct answer: (B)

2

Previous

Page 13 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Operations Research

131. If the primal has an unbound objective function value then the dual has _____.

A. solution
B. basic solution
C. basic feasible solution
D. no feasible solution

View answer

Correct answer: (D)
no feasible solution

132. If there is no non-negative replacement ratio in a solution which is sought to be improved, then the solution is _____.

A. bounded
B. unbounded
C. no solution
D. alternative solution

View answer

Correct answer: (B)
unbounded

133. An activity is represented by a/an _____.

A. arrow
B. straight line
C. curve
D. arc

View answer

Correct answer: (A)
arrow

134. A project consists of a number of tasks which are called _____.

A. activities
B. floats
C. events
D. paths

View answer

Correct answer: (A)
activities

135. The similarity between assignment problem and transportation problem is _____.

A. both are rectangular matrices
B. both are square matrices
C. both can be solved y graphical method
D. both have objective function and non-negativity constraints

View answer

Correct answer: (D)
both have objective function and non-negativity constraints

136. The penalty for not taking correct decision is known as _____.

A. fine

B. loss

C. cost

D. opportunity cost

View answer

Correct answer: (D)
opportunity cost

137. In a given system of m simultaneous linear equations in n unknowns (m<n) there will be _____.

A. n basic variables

B. m basic variables

C. (n-m) basic variables

D. (n+m) basic variables

View answer

Correct answer: (B)
m basic variables

138. If all aij values in the entering variable column of the simplex table are negative, then _____.

A. solution is unbounded

B. solution is degenerate

C. there exist no solution

D. there are multiple solutions

View answer

Correct answer: (A)
solution is unbounded

139. An unoccupied cell in the transportation method is analogous to a_____.

A. Zj-Cj value in the simplex table.

B. variable in the B-column in the simplex table.

C. variable not in the B-column in the simplex table.

D. value in the XB column in the simplex table.

View answer

Correct answer: (B)
variable in the B-column in the simplex table.

140. Every basic feasible solution of a general assignment problem having a square pay-off matrix of order n should have assignments equal to_____.

A. 2n-1

B. n

C. n+1

D. n-2

View answer

Correct answer: (A)

2n-1

Previous

Page 14 of 22

Next

Operations Research

141. Which of the following is correct?

A. Re-order quantity in a fixed order-interval system equals EOQ
B. Review period of the item is always kept higher than its lead time
C. Re-order level of an item is always more than its minimum stock
D. Buffer stock is the total stock kept to meet the demand during lead time

View answer

Correct answer: (C)
Re-order level of an item is always more than its minimum stock

142. The group replacement policy is suitable for identical low cost items which are likely to _____.

A. fail suddenly
B. fail completely and suddenly
C. fail over a period of time
D. be progressive and retrogressive

View answer

Correct answer: (C)
fail over a period of time

143. Identify the correct statement

A. an assignment problem may require the introduction of both dummy row and dummy column
B. an assignment problem with m rows and n columns will involves a total of m x n possible assignments
C. an unbalanced assignment is one where the number of rows is more than, or less than the number of columns
D. balancing any unbalanced assignment problem involves adding one dummy row or column

View answer

Correct answer: (C)
an unbalanced assignment is one where the number of rows is more than, or less than the number of columns

144. A game is said to be fair if _____.

A. lower and upper values are zero
B. only lower value to be zero
C. only upper value to be zero
D. lower and upper values are not equal to zero

View answer

Correct answer: (A)
lower and upper values are zero

145. Which of the following is not a part of holding (or carrying) costs?

A. Rent for storage space
B. Extra expenses for an overnight express mail.
C. Spoilage costs
D. Electricity and heat for the buildings

View answer

Correct answer: (B)
Extra expenses for an overnight express mail.

146. The area bounded by all the given constraints is called _____.

A. feasible region
B. basic solution
C. non feasible region
D. optimum basic feasible solution

View answer

Correct answer: (A)
feasible region

147. When D=18000, holding cost=Rs.1.20, set-up cost=Rs.400 ,EOQ = _____

A. 3465
B. 3750
C. 3500
D. 4000

View answer

Correct answer: (A)
3465

148. Given arrival rate = 15/hr, service rate = 20/hr, the value of traffic intensity is _____.

A. 3/4
B. 4/3
C. 3/5
D. 4/5

View answer

Correct answer: (A)
3/4

149. An activity is critical if its _____ float is zero

A. total
B. free
C. independent
D. interference

View answer

Correct answer: (A)
total

150. _____ is employed in construction and business problems

A. Queue
B. Replacement
C. CPM
D. PERT

View answer

Correct answer: (D)

PERT

Previous

Page 15 of 22

Next

Home
Accounting for Managers
Advertising and Sales Promotion
Behavioural and Allied Sciences
Brand Management
Business Communication
Business Economics
Business Environment
Business Ethics and Governance
Business Law
Business Mathematics
Business Statistics
Computers In Management
Cost and Managerial Accounting
E-Business
English Language
Entrepreneurship Management
Financial Management
Human Resource Management
Insurance and Risk Management
Management Information Systems
Marketing Management
Media Planning
Operations Research
Organisational Behavior
Principles and Practices of Management
Production and Operations Management
System Analysis and Design
Total Quality Management

Operations Research

151. _____ occurs when the number of occupied squares is less than the number of rows plus

A. Degeneracy
B. Infeasibility
C. Unboundedness
D. Unbalance
E. Redundancy

View answer

Correct answer: (A)
Degeneracy

152. _____ or _____ are used to "balance" an assignment or transportation problem.

A. Destinations; sources
B. Units supplied; units demanded
C. Dummy rows; dummy columns
D. Large cost coefficients; small cost coefficients
E. Artificial cells; degenerate cells

View answer

Correct answer: (C)
Dummy rows; dummy columns

153. A solution can be extracted from a model either by

A. Conducting experiments on it
B. Mathematical analysis
C. Both A and B
D. Diversified Techniques

View answer

Correct answer: (C)
Both A and B

154. An alternative optimal solution to a minimization transportation problem exists whenever opportunity cost corresponding to unused route of transportation is:

A. Positive & greater than zero
B. Positive with at least one equal to zero
C. Negative with at least one equal to zero
D. None of the above

View answer

Correct answer: (B)

Positive with at least one equal to zero

155. Which of these statements about the stepping-stone method is best?

A. A dummy source and destination must be added if the number of rows plus columns minus 1 is not equal to the number of filled squares.

B. Only squares containing assigned shipments can be used to trace a path back to an empty square.

C. An improvement index that is a net positive means that the initial solution can be improved.

D. Only empty squares can be used to trace a path back to a square containing an assigned shipment

View answer

Correct answer: (B)
Only squares containing assigned shipments can be used to trace a path back to an empty square.

156. An assignment problem can be viewed as a special case of transportation problem in which the capacity from each source is _____ and the demand at each destination is _____.

A. 1; 1

B. Infinity; infinity

C. 0; 0

D. 1000; 1000

E. -1; -1

View answer

Correct answer: (A)
1; 1

157. Both transportation and assignment problems are members of a category of LP problems called _____.

A. shipping problems

B. logistics problems

C. generalized flow problems

D. routing problems

E. network flow problems

View answer

Correct answer: (E)
network flow problems

158. Consider the given vectors: a(2,0), b(0,2), c(1,1), and d(0,3). Which of the following vectors are linearly independent?

A. a, b, and c are independent

B. a, b, and d are independent

C. a and c are independent

D. b and d are independent

View answer

Correct answer: (C)
a and c are independent

159. Consider the linear equation
2 x1 + 3 x2 - 4 x3 + 5 x4 = 10
How many basic and non-basic variables are defined by this equation?

A. One variable is basic, three variables are non-basic
B. Two variables are basic, two variables are non-basic
C. Three variables are basic, one variable is non-basic
D. All four variables are basic

View answer

Correct answer: (A)
One variable is basic, three variables are non-basic

160. During an iteration while moving from one solution to the next, degeneracy may occur when

A. The closed path indicates a diagonal move
B. Two or more occupied cells are on the closed path but neither of them represents a corner of the path.
C. Two or more occupied cells on the closed path with minus sign are tied for lowest circled value
D. Either of the above

View answer

Correct answer: (C)
Two or more occupied cells on the closed path with minus sign are tied for lowest circled value

Operations Research

161. Feasible solution satisfies _____

A. Only constraints
B. only non-negative restriction
C. [a] and [b] both
D. [a],[b] and Optimum solution

View answer

Correct answer: (C)
[a] and [b] both

162. Graphical optimal value for Z can be obtained from

A. Corner points of feasible region
B. Both a and c
C. corner points of the solution region
D. none of the above

View answer

Correct answer: (A)
Corner points of feasible region

163. Hungarian Method is used to solve

A. A transportation problem
B. A travelling salesman problem
C. A LP problem
D. Both a & b

View answer

Correct answer: (B)
A travelling salesman problem

164. Identify the type of the feasible region given by the set of inequalities
x - y <= 1
x - y >= 2
where both x and y are positive.

A. A triangle
B. A rectangle
C. An unbounded region
D. An empty region

View answer

Correct answer: (D)
An empty region

165. If an opportunity cost value is used for an unused cell to test optimality, it should be

A. Equal to zero
B. Most negative number
C. Most positive number
D. Any value

View answer

Correct answer: (B)
Most negative number

166. In a transportation problem, we must make the number of _____ and _____ equal.

A. destinations; sources
B. units supplied; units demanded
C. columns; rows
D. positive cost coefficients; negative cost coefficients
E. warehouses; suppliers

View answer

Correct answer: (B)
units supplied; units demanded

167. In a transportation problem, when the number of occupied routes is less than the number of rows plus the number of columns -1, we say that the solution is:

A. Unbalanced.
B. Infeasible.
C. Optimal.
D. impossible.
E. Degenerate.

View answer

Correct answer: (E)
Degenerate

168. In assignment problem of maximization, the objective is to maximise

A. Profit
B. optimization
C. cost
D. None of the above

View answer

Correct answer: (A)
Profit

169. In case of an unbalanced problem, shipping cost coefficients of _____ are assigned to each created dummy factory or warehouse.

A. very high positive costs

B. very high negative costs

C. 10

D. zero

E. one

View answer

Correct answer: (D)
zero

170. In Degenerate solution value of objective function _____.

A. increases infinitely

B. basic variables are nonzero

C. decreases infinitely

D. One or more basic variables are zero

View answer

Correct answer: (D)
One or more basic variables are zero

Operations Research

171. In game theory, the outcome or consequence of a strategy is referred to as the

A. payoff.
B. penalty.
C. reward.
D. end-game strategy.

View answer

Correct answer: (A)
payoff.

172. In graphical method the restriction on number of constraint is _____.

A. 2
B. not more than 3
C. 3
D. none of the above

View answer

Correct answer: (D)
none of the above

173. In graphical representation the bounded region is known as _____ region.

A. Solution
B. basic solution
C. feasible solution
D. optimal

View answer

Correct answer: (C)
feasible solution

174. In LPP the condition to be satisfied is

A. Constraints have to be linear
B. Objective function has to be linear
C. none of the above
D. both a and b

View answer

Correct answer: (D)
both a and b

175. In operations research, the _____ are prepared for situations.

A. mathematical models
B. physical models diagrammatic
C. diagrammatic models
D. all of above

View answer

Correct answer: (A)
mathematical models

177. One disadvantage of using North-West Corner rule to find initial solution to the transportation problem is that

A. It is complicated to use
B. It does not take into account cost of transportation
C. It leads to a degenerate initial solution
D. All of the above

View answer

Correct answer: (B)
It does not take into account cost of transportation

178. Operations management can be defined as the application of _____ to a problem within a system to yield the optimal solution.

A. Suitable manpower
B. mathematical techniques, models, and tools
C. Financial operations
D. all of above

View answer

Correct answer: (B)
mathematical techniques, models, and tools

179. Operations research is based upon collected information, knowledge and advanced study of various factors impacting a particular operation. This leads to more informed _____.

A. Management processes
B. Decision making
C. Procedures
D. all of above

View answer

Correct answer: (B)
Decision making

180. Operations research is the application of _____ methods to arrive at the optimal Solutions to the problems.

A. economical

B. scientific

C. a and b both

D. artistic

View answer

Correct answer: (B)
scientific

Previous

Page 18 of 22

Next

Operations Research

181. Operations research was known as an ability to win a war without really going in to _____

A. Battle field
B. Fighting
C. The opponent
D. Both A and B

View answer

Correct answer: (D)
Both A and B

182. Optimal solution of an assignment problem can be obtained only if

A. Each row & column has only one zero element
B. Each row & column has at least one zero element
C. The data is arrangement in a square matrix
D. None of the above

View answer

Correct answer: (A)
Each row & column has only one zero element

183. OR can evaluate only the effects of _____.

A. Personnel factors.
B. Financial factors
C. Numeric and quantifiable factors.
D. all of above

View answer

Correct answer: (C)
Numeric and quantifiable factors.

184. OR has a characteristics that it is done by a team of

A. Scientists
B. Mathematicians
C. Academics
D. All of the above

View answer

Correct answer: (D)
All of the above

185. OR techniques help the directing authority in optimum allocation of various limited resources like _____

A. Men and Machine
B. Money
C. Material and Time
D. All of the above

View answer

Correct answer: (D)
All of the above

186. OR uses models to help the management to determine its _____

A. Policies
B. Actions
C. Both A and B
D. None of the above

View answer

Correct answer: (C)
Both A and B

187. The degeneracy in the transportation problem indicates that

A. Dummy allocation(s) needs to be added
B. The problem has no feasible solution
C. The multiple optimal solution exist
D. a & b but not c

View answer

Correct answer: (C)
The multiple optimal solution exist

188. The dummy source or destination in a transportation problem is added to

A. Satisfy rim conditions
B. Prevent solution from becoming degenerate
C. Ensure that total cost does not exceed a limit
D. None of the above

View answer

Correct answer: (A)
Satisfy rim conditions

189. The equation Ri + Kj = Cij is used to calculate _____.

A. an improvement index for the stepping-stone method
B. the opportunity costs for using a particular route

C. the MODI cost values (Ri, Kj)

D. the degeneracy index

E. optimality test

View answer

Correct answer: (C)
the MODI cost values (Ri, Kj)

190. The initial solution of a transportation problem can be obtained by applying any known method. However, the only condition is that

A. The solution be optimal

B. The rim conditions are satisfied

C. The solution not be degenerate

D. All of the above

View answer

Correct answer: (B)
The rim conditions are satisfied

Operations Research

191. The large negative opportunity cost value in an unused cell in a transportation table is chosen to improve the current solution because

A. It represents per unit cost reduction
B. It represents per unit cost improvement
C. It ensure no rim requirement violation
D. None of the above

View answer

Correct answer: (A)
It represents per unit cost reduction

192. The method of finding an initial solution based upon opportunity costs is called _____.

A. the northwest corner rule
B. Vogel's approximation
C. Johanson's theorem
D. Flood's technique
E. Hungarian method

View answer

Correct answer: (B)
Vogel's approximation

193. The net cost of shipping one unit on a route not used in the current transportation problem solution is called the _____.

A. change index
B. new index
C. MODI index
D. idle index
E. Improvement index

View answer

Correct answer: (E)
Improvement index

194. The objective function and constraints are functions of two types of variables, _____ variables and _____ variables.

A. Positive and negative
B. Controllable and uncontrollable
C. Strong and weak
D. None of the above

View answer

Correct answer: (B)

Controllable and uncontrollable

195. The objective function for a minimization problem is given by
z = 2 x1 - 5 x2 + 3 x3
The hyperplane for the objective function cuts a bounded feasible region in the space (x1,x2,x3). Find the direction vector d, where a finite optimal solution can be reached.

A. d(2,-5,3)

B. d(-2,5,-3)

C. d(2,5,3)

D. d(-2,-5,-3)

View answer

Correct answer: (B)
d(-2,5,-3)

196. The occurrence of degeneracy while solving a transportation problem means that

A. Total supply equals total demand

B. The solution so obtained is not feasible

C. The few allocations become negative

D. None of the above

View answer

Correct answer: (B)
The solution so obtained is not feasible

197. The only restriction we place on the initial solution of a transportation problem is that: we must have nonzero quantities in a majority of the boxes.

A. all constraints must be satisfied.

B. demand must equal supply.

C. we must have a number (equal to the number of rows plus the number of columns minus one) of boxes which contain nonzero quantities.

D. None of the above

View answer

Correct answer: (A)
all constraints must be satisfied.

198. The Operations research technique which helps in minimizing total waiting and service costs is

A. Queuing Theory

B. Decision Theory

C. Both A and B

D. None of the above

View answer

Correct answer: (A)
Queuing Theory

199. The procedure used to solve assignment problems wherein one reduces the original assignment costs to a table of opportunity costs is called _____.

A. stepping-stone method

B. matrix reduction

C. MODI method

D. northwest reduction

E. simplex reduction

View answer

Correct answer: (B)
matrix reduction

200. The purpose of a dummy source or dummy destination in a transportation problem is to

A. prevent the solution from becoming degenerate.

B. obtain a balance between total supply and total demand.

C. make certain that the total cost does not exceed some specified figure.

D. provide a means of representing a dummy problem.

View answer

Correct answer: (B)
obtain a balance between total supply and total demand.

Operations Research

201. The purpose of the stepping-stone method is to

A. develop the initial solution to the transportation problem.
B. assist one in moving from an initial feasible solution to the optimal solution.
C. determine whether a given solution is feasible or not.
D. identify the relevant costs in a transportation problem.

View answer

Correct answer: (B)
assist one in moving from an initial feasible solution to the optimal solution.

202. The smallest quantity is chosen at the corners of the closed path with negative sign to be assigned at unused cell because

A. It improve the total cost
B. It does not disturb rim conditions
C. It ensure feasible solution
D. All of the above

View answer

Correct answer: (C)
It ensure feasible solution

203. The solution to a transportation problem with â€˜mâ€™ rows (supplies) & â€˜nâ€™ columns (destination) is feasible if number of positive allocations are

A. m+n
B. m*n
C. m+n-1
D. m+n+1

View answer

Correct answer: (C)
m+n-1

204. The transportation method assumes that

A. there are no economies of scale if large quantities are shipped from one source to one destination.
B. the number of occupied squares in any solution must be equal to the number of rows in the table plus the number of columns in the table plus 1.
C. there is only one optimal solution for each problem.
D. the number of dummy sources equals the number of dummy destinations.

View answer

Correct answer: (A)
there are no economies of scale if large quantities are shipped from one source to one destination.

205. What enables us to determine the earliest and latest times for each of the events and activities and thereby helps in the identification of the critical path?

A. Programme Evaluation
B. Review Technique (PERT)
C. Both A and B
D. Deployment of resources

View answer

Correct answer: (C)
Both A and B

206. What have been constructed from OR problems an methods for solving the models that are available in many cases?

A. Scientific Models
B. Algorithms
C. Mathematical Models
D. None of the above

View answer

Correct answer: (C)
Mathematical Models

207. What is the difference between minimal cost network flows and transportation problems?

A. The minimal cost network flows are special cases of transportation problems
B. The transportation problems are special cases of the minimal cost network flows
C. There is no difference
D. The transportation problems are formulated in terms of tableaus, while the minimal cost network flows are formulated in terms of graphs

View answer

Correct answer: (B)
The transportation problems are special cases of the minimal cost network flows

208. What is the objective function in linear programming problems?

A. A constraint for available resource
B. An objective for research and development of a company
C. A linear function in an optimization problem
D. A set of non-negativity conditions

View answer

Correct answer: (C)
A linear function in an optimization problem

209. When total supply is equal to total demand in a transportation problem, the problem is said to be

A. Balanced

B. Unbalanced

C. Degenerate

D. None of the above

View answer

Correct answer: (A)
Balanced

210. Which of the following is a method for improving an initial solution in a transportation problem?

A. northwest-corner

B. intuitive lowest-cost

C. southeast-corner rule

D. stepping-stone

View answer

Correct answer: (D)
stepping-stone

Operations Research

211. Which of the following is NOT needed to use the transportation model?

A. the cost of shipping one unit from each origin to each destination
B. the destination points and the demand per period at each
C. the origin points and the capacity or supply per period at each
D. degeneracy

View answer

Correct answer: (D)
degeneracy

212. Which of the following is not the phase of OR methodology?

A. Formulating a problem
B. Constructing a model
C. Establishing controls
D. Controlling the environment

View answer

Correct answer: (D)
Controlling the environment

213. Which of the following is used to come up with a solution to the assignment problem?

A. MODI method
B. northwest corner method
C. stepping-stone method
D. Hungarian method
E. none of the above

View answer

Correct answer: (D)
Hungarian method

214. Which of the following methods is used to verify the optimality of the current solution of the transportation problem

A. Least cost method
B. Vogel's approximation method
C. Modified distribution method
D. All of the above

View answer

Correct answer: (C)
Modified distribution method

215. Which of these statements about the stepping-stone method is best?

A. A dummy source and destination must be added if the number of rows plus columns minus 1 is not equal to the number of filled squares.

B. Only squares containing assigned shipments can be used to trace a path back to an empty square.

C. An improvement index that is a net positive means that the initial solution can be improved.

D. Only empty squares can be used to trace a path back to a square containing an assigned shipment

View answer

Correct answer: (B)
Only squares containing assigned shipments can be used to trace a path back to an empty square.

216. Which statement characterizes standard form of a linear programming problem?

A. Constraints are given by inequalities of any type

B. Constraints are given by a set of linear equations

C. Constraints are given only by inequalities of >= type

D. Constraints are given only by inequalities of <= type

View answer

Correct answer: (A)
Constraints are given by inequalities of any type

217. Which technique is used in finding a solution for optimizing a given objective, such as profit maximization or cost reduction under certain constraints?

A. Quailing Theory

B. Waiting Line

C. Both A and B

D. Linear Programming

View answer

Correct answer: (D)
Linear Programming

218. Who defined OR as scientific method of providing executive departments with a quantitative basis for decisions regarding the operations under their control?

A. Morse and Kimball (1946)

B. P.M.S. Blackett (1948)

C. E.L. Arnoff and M.J. Netzorg

D. None of the above

View answer

Correct answer: (A)
Morse and Kimball (1946)

219. With the transportation technique, the initial solution can be generated in any fashion one chooses. The only restriction is that

A. the edge constraints for supply and demand are satisfied.

B. the solution is not degenerate.

C. the solution must be optimal.

D. one must use the northwest-corner method.

View answer

Correct answer: (A)
the edge constraints for supply and demand are satisfied

Previous

Page 22 of 22

Next