Online Examinations (Even Sem/Part-I/Part-II Examinations 2020 - 2021

Course Name - –Quantitative Techniques
Course Code - MBA208

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Answer all the questions. Each question carry one mark.

9. 1.Operations research is the application of methods to arrive at the optimal Solutions to the problems.

Mark only one oval.

- [ ] economical
- [ ] scientific
- [ ] a and b both
- [ ] artistic

10. 2.Which of the following is not the phase of OR methodology?

Mark only one oval.

- Formulating a problem
- Constructing a model
- Establishing controls
- Controlling the environment

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

Mark only one oval.

- Positive and negative
- Controllable and uncontrollable
- Strong and weak
- None of these

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

Mark only one oval.

- Quailing Theory
- Waiting Line
- Both A and B
- Linear Programming

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

Mark only one oval.

- Queuing Theory
- Decision Theory
- Both A and B
- None of these

14. 6.Minimize Z = _____

Mark only one oval.

- maximize(Z)
- #NAME?
- maximize(-Z)
- None of these

15. 7.In graphical representation the bounded region is known as _____ region.

Mark only one oval.

- Solution
- basic solution
- feasible solution
- optimal

16. 8.Graphical optimal value for Z can be obtained from

Mark only one oval.

- Corner points of feasible region
- Both a and c
- corner points of the solution region
- None of these

17. 9.In LPP the condition to be satisfied is

Mark only one oval.

- Constraints have to be linear
- Objective function has to be linear
- None of these
- Both A and B

18. 10.A feasible solution to a linear programming problem _____.

Mark only one oval.

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

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

Mark only one oval.

- feasible
- infeasible
- bounded
- no solution

20. 12.Service mechanism in a queuing system is characterized by _____.

Mark only one oval.

- customers behavior
- servers behavior
- customers in the system
- server in the system

21. 13.The objective of network analysis is to_____.

Mark only one oval.

- minimize total project duration
- minimize toal project cost
- minimize production delays, interruption and conflicts
- maximize total project duration

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

Mark only one oval.

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

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

Mark only one oval.

- feasible
- bounded
- unbounded
- infinite

24. 16.The calling population is considered to be infinite when _____.

Mark only one oval.

- all customers arrive at once
- capacity of the system is infinite
- service rate is faster than arrival rate
- arrivals are independent of each other

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

Mark only one oval.

- Only row having single zero
- Only column having single zero
- Only row/column having single zero
- Column having more than one zero

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

Mark only one oval.

- convex
- polygon
- triangle
- bold

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

Mark only one oval.

- constraints
- objective function
- basic solution
- feasible solution

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

Mark only one oval.

- mn
- m+n
- m-n
- m/n

29. 21.The non basic variables are called _____.

Mark only one oval.

- shadow cost
- opportunity cost
- slack variable
- surplus variable

30. 22.Key element is also known as _____.

Mark only one oval.

- slack
- surplus
- artificial
- pivot

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

Mark only one oval.

- m+n
- mn
- m-n
- m+n-1

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

Mark only one oval.

- occupied
- unoccupied
- no
- finite

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

Mark only one oval.

- occupied
- unoccupied
- no
- finite

34. 26.The assignment algorithm was developed by _____ method.

Mark only one oval.

- HUNGARIAN
- VOGELS
- MODI
- TRAVELING SALES MAN

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

Mark only one oval.

- 0
- 1
- M
- #NAME?

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

Mark only one oval.

- Simplex
- Dual simplex
- Big M
- Modi

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

Mark only one oval.

- Pre emptive
- FIFO
- LIFO
- SIRO

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

Mark only one oval.

- pure birth model
- pure death model
- transient state
- steady state

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

Mark only one oval.

- predecessor activity
- successor activity
- dummy activity
- activity

40. 32.The difference between total and free float is _____.

Mark only one oval.

- ◯ total
- ◯ free
- ◯ independent
- ◯ interference

41. 33.Mathematical model of linear programming problem is important because _____.

Mark only one oval.

- ◯ it helps in converting the verbal description and numerical data into mathematical expression
- ◯ decision makers prefer to work with formal models
- ◯ it captures the relevant relationship among decision factors
- ◯ it enables the use of algebraic technique

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

Mark only one oval.

- ◯ adding another constraint
- ◯ adding another variable
- ◯ removing a constraint
- ◯ removing a variable

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

Mark only one oval.

- a coefficient in the objective function
- a right hand side constant of a function
- an input output coefficient a left hand side constraint
- coefficient variable

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

Mark only one oval.

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

45. 37.Maximization assignment problem is transformed into a minimization problem by_____.

Mark only one oval.

- adding each entry in a column from the maximum value in that column
- subtracting each entry in a column from the maximum value in that column
- subtracting each entry in the table from the maximum value in that table
- adding each entry in the table from the maximum value in that table

46. 38.Replace an item when_____.

Mark only one oval.

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

47. 39.In a zero-sum game

Mark only one oval.

- What one player wins, the other loses.
- The sum of each player's winnings if the game is played many times must be zero.
- The game is fair each person has an equal chance of winning.
- Long-run profits must be zero.

48. 40.Which one of the following is a part of every game theory model?

Mark only one oval.

- Players
- Payoffs
- Probabilities
- Strategies

49. 41.This innovative science of Operations Research was discovered during

Mark only one oval.

- Civil War
- World War 2
- World War 1
- None of these

50. 42.In Vogel's Approximation Method, the opportunity cost associated with a row is determined by

Mark only one oval.

- The difference between the smallest cost and the next smallest cost in the row
- The difference between the smallest unused cost and the next smallest unused cost in the row
- The difference between the smallest cost and next smallest unused cost in the row
- None of these

51. 43.A constraint in an LP model restricts

Mark only one oval.

- value of the objective function
- Value of the decision variable
- Use of the available resources
- All of these

52. 44.A feasible solution of LPP

Mark only one oval.

- Must satisfy all the constraints simultaneously
- Need not satisfy all the constraints, only some of them
- Must be a corner point of the feasible region
- All of these

53. 45.The objective function for a L.P model is 3x1+2x2, if x1=20 and x2=30, what is the value of the objective function?

Mark only one oval.

- 0
- 50
- 60
- 120

54. 46.To convert '‰' inequality constraints into equality constraints, we must

Mark only one oval.

- add a slack variable
- subtract an artificial variable
- add a surplus variable and subtract an artificial variable.

55. 47.A game is said to be fair if

Mark only one oval.

- ◯ both upper and lower values of the game are same and zero
- ◯ upper and lower values of the game are not equal
- ◯ upper value is more than lower value of the game
- ◯ None of these

56. 48.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

Mark only one oval.

- ◯ biased game
- ◯ zero-sum game
- ◯ fair game
- ◯ All of these

57. 49.In a mixed strategy game

Mark only one oval.

- ◯ no saddle points exists
- ◯ each player always selects same strategy
- ◯ each player always selects same strategy without considering other playerâ€™s choice
- ◯ All of these

58. 50.Game theory is the study of

Mark only one oval.

- selecting optimal strategies
- resolving conflict between players
- both selecting optimal strategies and resolving conflict between players
- none of the above

59. 51.The critical path of a network is the

Mark only one oval.

- Path with the fewest activities.
- Shortest time path through the network.
- Longest time path through the network.
- Path with the most activities.

60. 52.The critical path

Mark only one oval.

- is any path that goes from the starting node to the completion node.
- is a combination of all paths.
- is the shortest path.
- is the longest path.

61. 53.One of most widely used exponential distributions is called a

Mark only one oval.

- Passion distribution
- Possible distribution
- Poisson distribution
- Poisson association

62. 54.The scientific method in O.R. study generally involves

Mark only one oval.

- Judgement Phase
- Research Phase
- Action Phase
- All of the given

63. 55.One can find the initial basic feasible solution by using_____?

Mark only one oval.

- VAM
- MODI
- Optimality test
- None of these

64. 56.For maximization in TP , the objective is to maximize the total

Mark only one oval.

- Solution
- Profit Matrix
- Profit
- None of these

65. 57.An assignment problem is considered as a particular case of a transportation problem because.

Mark only one oval.

- The number of rows equals columns
- All xij = 0 or 1
- All rim conditions are 1
- All of these

66. 58.Before formulating a formal LP model, it is better to

Mark only one oval.

- Express each constrain in words
- Express the objective function in words
- Verbally identify decision variables
- All of these

67. 59.The Hungarian method for solving an assignment problem can also be used to solve.

Mark only one oval.

- A transportation problem
- A travelling salesman problem
- A LP problem
- None of these

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

Mark only one oval.

- destinations; sources
- units supplied; units demanded
- positive cost coefficients; negative cost coefficients
- warehouses; suppliers