Business Mathematics

1. The objective of the transportation problem which is to be maximized is to

A. maximize the total profit.
B. minimize the total loss .
C. neither maximize nor minimize.
D. optimal cost.

View answer
Correct answer: (A)
maximize the total profit.

2. A diagonal matrix in which all the diagonal elements are equal is a _____.

A. scalar matrix.
B. column matrix.
C. unit matrix.
D. None of these.

View answer
Correct answer: (A)
scalar matrix.

3. Cramer's Rule is also known as _____.

A. Inverse Matrix Method
B. Matrix Method
C. Determinant Method
D. Inverse Method

View answer
Correct answer: (C)
Determinant Method

4. The Lender's are also known as _____

A. Creditor's
B. Debtor's
C. Buyer's
D. None of the above.

View answer
Correct answer: (A)
Creditor's

5. Under annuity due, payment is due at the _____.

A. beginning of the time.
B. end of the time.
C. at the middle of the time.
D. each.

View answer
Correct answer: (A)
beginning of the time.

6. Banker's discount is given by the formula _____.

A. Anr/100.
B. Pnr/100.
C. Anr.
D. Pnr.

View answer
Correct answer: (A)
Anr/100.

7. Unbounded solution in an LPP is _____.

A. where the objective function can be decreased indefinitely.
B. which maximizes the objective function.
C. where the objective function can be increased or decreased indefinitely.
D. where the objective function can be increased indefinitely.

View answer
Correct answer: (C)
where the objective function can be increased or decreased indefinitely.

8. The Key row is selected when the column of Z_j-C_j is finding the ratio which is _____.

A. maximum.
B. minimum.
C. largest positive.
D. most negative.

View answer
Correct answer: (B)
minimum.

9. Graphical method can be used only when the decision variables is _____.

A. more than 3.
B. more than1.
C. two.
D. one.

View answer
Correct answer: (C)
two.

10. _____ is the time consuming job (or) task that is a key subpart of the total project.

A. Activity.
B. Event.
C. Node.
D. All the above.

View answer
Correct answer: (A)
Activity.

11. The test of optimality in simplex method is _____.

A. Z_j-C_j >0.
B. Z_j-C_j <0.
C. Z_j-C_j =0.
D. Z_j-C_j<0.

View answer
Correct answer: (A)

Z_j-C_j >0.

12. The critical path satisfy the condition that _____

A. E_j=L_j and E_j=L_j.
B. L_j-E_j= L_j- L_j.
C. L_j-E_j= L_j- L_j=d(constant).
D. All the above.

View answer

Correct answer: (D)

$E_j=L_j$ and $E_j=L_j$.

13. If A, B are two matrices and K is a scalar then _____.

A. K(A+B) ≠KA+KB
B. K(A+B)=KA+KB.
C. K(A+B)<KA+KB.
D. K(A+B)>KA+KB.

View answer
Correct answer: (B)
K(A+B)=KA+KB.

14. If A,B and C are matrices the associative property is _____.

A. (AB)C<A(BC).
B. (AB)C>A(BC).
C. (AB)C≠A(BC).
D. (AB)C=A(BC).

View answer
Correct answer: (D)

(AB)C=A(BC).

15. If any two rows and columns of a determinant are identical, the value of the determinant is _____.

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

View answer
Correct answer: (B)
0.

16. Inverse of a matrix exists if and only if _____.

A. determinant value exists.
B. determinant value is zero.

C. determinant value is one.
D. determinant value is negative.

View answer
Correct answer: (A)
determinant value exists.

17. I stands for _____

A. Simple Interest
B. Compound Interest
C. Rate of interest
D. No.of.years.

View answer
Correct answer: (A)
Simple Interest

18. Simple interest will be the income for _____.

A. lender.
B. borrower.
C. both.
D. neither lender nor borrower.

View answer
Correct answer: (A)
lender.

19. 51-46+3(5) = _____

A. 40
B. 20
C. 41
D. 52

View answer
Correct answer: (B)
20

20. Face value of a bill of exchange is given by the formula _____.

A. 100A/100+nr.
B. (B.DxT.D)/B.D-T.D).
C. (B.DxT.D)/B.D+T.D).

D. (B.D+T.D)/B.D-T.D).

View answer
Correct answer: (B)
(B.DxT.D)/B.D-T.D).

21. An LPP has _____.

A. one optimal solution.
B. two optimal solutions.
C. Three optimal solutions.
D. none of these.

View answer
Correct answer: (D)
none of these.

22. The two forms of LPP are _____.

A. standard form and canonical form.
B. standard form and general form.
C. matrix form and canonical form.
D. matrix form and standard form.

View answer
Correct answer: (A)
standard form and canonical form.

23. In the standard form of LPP if the objective function is of minimization then the right hand side of the constraints should be _____.

A. positive.
B. negative.
C. non-negative.
D. zero.

View answer
Correct answer: (C)
non-negative.

24. In simplex method the LPP has unbounded solution if the variable in the key column is _____.

A. maximum.
B. minimum.

C. positive.
D. negative.

View answer
Correct answer: (D)
negative.

25. Which of the following is not true about feasibility?

A. it cannot be determined in a graphical solution of an L.P.P.
B. it is independent of the objective function.
C. it implies that there must be a convex region satisfying all the constraints.
D. extreme points of the convex region gives the optimum solution.

View answer
Correct answer: (A)
it cannot be determined in a graphical solution of an L.P.P.

26. Network models have advantage in terms of project _____

A. Planning
B. Scheduling.
C. Controlling.
D. All the above.

View answer
Correct answer: (D)
All the above.

27. If an activity has zero slack,it implies that _____

A. It lies on the critical path.
B. It is a dummy acitivity.
C. The project is progressing well.
D. None of the above.

View answer
Correct answer: (A)
It lies on the critical path.

28. Float or slack analysis is useful for _____

A. Projects behind the schedule only.
B. Projects ahead of the schedule only.
C. Both a & b.

D. None of the above.

View answer
Correct answer: (A)
Projects behind the schedule only.

29. Crashing is the process of reducing the total time that it takes to complete a project by expanding _____

A. Additional funds.
B. No.of.days
C. Both a & b
D. None of the above

View answer
Correct answer: (A)
Additional funds.

30. Network is the graphical display of a project that contains both _____

A. Activities and events.
B. Activities and dummy activities.
C. Both (a) & (b).
D. Neither (a) nor (b).

View answer
Correct answer: (A)
Activities and events.

31. PERT is a tool for _____ and control time.

A. Delaying.
B. Planning.
C. Both a & b
D. None of the above

View answer
Correct answer: (B)
Planning.

32. Transportation problem is a special class of _____.

A. LPP.
B. assignment problem.
C. none of the two.

D. both 1 and 2.

View answer
Correct answer: (A)
LPP.

33. The cells in the Transportation problem can be classified as _____.

A. assigned cells and empty cells.
B. allocated cells and un allocated cells.
C. occupied and unoccupied cells.
D. assigned and unoccupied cells.

View answer
Correct answer: (C)
occupied and unoccupied cells.

34. The basic feasible solution to a transportation problem is said to be optimal if it _____.

A. maximizes or minimizes the transportation cost.
B. maximizes the transportation cost.
C. minimizes the transportation cost.
D. has degenerate solution.

View answer
Correct answer: (C)
minimizes the transportation cost.

35. In transportation problem if total supply < total demand we add _____.

A. dummy row with cost 0.
B. dummy column with cost 0.
C. dummy row with cost 1.
D. dummy column with cost 1.

View answer
Correct answer: (A)
dummy row with cost 0.

36. In Maximization case of transportation problem we convert into minimization by subtracting all the elements from the _____.

A. zero.
B. one.

C. highest element.
D. lowest element.

View answer
Correct answer: (C)
highest element.

37. In assignment problem if number of column is greater than row then _____.

A. dummy column is added.
B. dummy row added.
C. row with cost 1 is added.
D. column with cost 1 is added.

View answer
Correct answer: (B)
dummy row added.

38. In transportation problem 'NWC' stands for _____.

A. North West Corner
B. Net Working Capital
C. Naval Weapons Center
D. Nuclear Weapons Convention

View answer
Correct answer: (A)
North West Corner

39. Zero matrix is otherwise known as _____.

A. null matrix.
B. square matrix.
C. unit matrix.
D. triangular matrix.

View answer
Correct answer: (A)
null matrix.

40. When the number of rows and the number of columns of a matrix are equal, the matrix is _____.

A. square matrix.
B. row matrix.

C. column matrix.
D. none of these.

View answer
Correct answer: (A)
square matrix.

41. If the number of rows of a matrix is greater than the number of columns then the matrix is called as _____.

A. a row matrix.
B. a column matrix.
C. a rectangular matrix.
D. a square matrix.

View answer
Correct answer: (C)
a rectangular matrix.

42. The _____ is the order of the largest square submatrix.

A. Rank of a matrix
B. Size of a matrix
C. Both a & b
D. None of the above.

View answer
Correct answer: (A)
Rank of a matrix

43. The formula for the face value A is given by _____.

A. (B.DxT.D)/(B.D-T.D).
B. 100T.D/nr.
C. 100r/100-nr.
D. Pnr/100.

View answer
Correct answer: (B)
100T.D/nr.

44. Under compound interest the formula for A is given by _____.

A. A=P(1+ni).
B. A=P(1+i).

C. A=Pnr/100.
D. $A=P(1+i)^n$.

View answer
Correct answer: (D)

$A=P(1+i)^n$.

45. The region on the graph sheet with satisfies the constraints including the non-negativity restrictions is called the _____ space

A. solution.
B. interval.
C. concave.
D. convex.

View answer
Correct answer: (A)
solution.

46. An LPP deals with problems involving only _____.

A. single objective.
B. multiple objective.
C. two objective.
D. none of these.

View answer
Correct answer: (A)
single objective.

47. In Graphical solution the feasible solution is any solution to a LPP which satisfies _____.

A. only objective function.
B. non-negativity restriction.
C. only constraint.
D. all the three.

View answer
Correct answer: (B)
non-negativity restriction.

48. In an LPP the solution for the problems involving more than 2 variables can be solved using _____ _.

A. graphical method.
B. simplex method.
C. hungarian method.
D. all the above

View answer
Correct answer: (B)
simplex method.

49. The Key column in simplex method is selected when the column of Z_j-C_j is _____.

A. most negative.
B. largest negative.
C. positive.
D. zero.

View answer
Correct answer: (A)
most negative.

50. Which of the following is associated with any L.P.P?

A. feasible solution.
B. optimum solution.
C. basic solution.
D. all the above.

View answer
Correct answer: (D)
all the above.

51. The slack for an activity is equal to _____

A. LF-LS.
B. EF-ES.
C. LS-ES.
D. None of the above.

View answer
Correct answer: (C)
LS-ES.

52. A dummy activity is used in the network diagram when _____

A. Two parallel activities have the same tail and head events.
B. The chain of acitivities may have a common event yet he independent by themselves.
C. Both a & b
D. None of the above.

View answer
Correct answer: (C)
Both a & b

53. Activity –on-arrow (AOA) diagram is prefeered over Activity – on-node (AON) diagram because _____

A. AOA diagrams are simple to construct.
B. AOA diagrams give a better sense of the flow of time throughout a project.
C. AOA diagrams do not involve dummy activites
D. ALL the above.

View answer
Correct answer: (B)
AOA diagrams give a better sense of the flow of time throughout a project.

54. Earliest finish time that an activity can be finished without _____ of precedence requirements.

A. Planning.
B. Violation.
C. Both a&b
D. None of the above

View answer
Correct answer: (B)
Violation.

55. A small circle or rectangle that is known as _____ serves as a junction point in the project network.

A. Event.
B. Node.
C. Slack.
D. Variables.

View answer

Correct answer: (B)
Node.

56. Project _____ phase allocates resources to work packages.

A. Planning.
B. Scheduling.
C. Controlling.
D. Both b & c.

View answer
Correct answer: (A)
Planning.

57. The Objective function of Transportation problem is to _____.

A. maximize the total cost.
B. minimize or maximize the total cost.
C. minimize the total cost.
D. total cost should be zero.

View answer
Correct answer: (C)
minimize the total cost.

58. In Least cost method the allocation is done by selecting _____.

A. upper left corner.
B. upper right corner.
C. middle cell in the transportation table.
D. cell with the lowest cost.

View answer
Correct answer: (D)
cell with the lowest cost.

59. Purpose of MODI method is to get _____.

A. degenerate solution.
B. non-degenerate solution.
C. optimal.
D. basic feasible solution.

View answer

Correct answer: (C)
optimal.

60. In transportation problem if total supply > total demand we add _____.

A. dummy row with cost 0.
B. dummy column with cost 0.
C. dummy row with cost 1.
D. dummy column with cost 1.

View answer
Correct answer: (B)
dummy column with cost 0.

61. The application of assignment problems is to obtain _____.

A. only minimum cost.
B. only maximum profit.
C. minimum cost or maximum profit.
D. assign the jobs.

View answer
Correct answer: (D)
assign the jobs.

62. The assignment problem is said to be balanced if it is _____.

A. square matrix.
B. rectangular matrix.
C. unit matrix.
D. triangular matrix.

View answer
Correct answer: (A)
square matrix.

63. The objective of Transportation problem is to allocate _____.

A. number of origins to equal number of destinations at minimum cost.
B. number of origins to equal number of destination at maximum cost.
C. only to maximize cost.
D. only to maximize the profit.

View answer

Correct answer: (A)
number of origins to equal number of destinations at minimum cost

64. If Aand B are matrices of same order then _____.

A. A+B=B+A.
B. A+B≠B+A.
C. A+B<B+A.
D. A+B>B+A.

View answer
Correct answer: (A)
A+B=B+A.

65. When all the elements of a matrix are zeros, the matrix is called _____.

A. unit matrix.
B. square matrix.
C. null matrix.
D. Row matrix.

View answer
Correct answer: (C)
null matrix.

66. (3 8 9 - 2) is a row matrix of order_____.

A. 4x4.
B. 1x4.
C. 1x1.
D. 4x1.

View answer
Correct answer: (B)
1x4.

67. If a matrix has 4 rows and 3 columns, then the size will be denoted by

A. 3x4
B. 3x3
C. 4x3
D. 4x4

View answer

Correct answer: (C)
4x3

68. The borrowers are also known as _____.

A. Debtor's
B. Creditor's
C. Both a & b
D. None of the above.

View answer
Correct answer: (A)
Debtor's

69. The compound interest for Rs 20000 for 3 years at 10 & is _____.

A. 2500.
B. 2200.
C. 6000.
D. 2500.

View answer
Correct answer: (C)
6000.

70. When the payments are to be made at the end of each interval the annuity is called _____.

A. immediate annuity.
B. annuity due.
C. both(a) and(b).
D. present annuity.

View answer
Correct answer: (A)
immediate annuity.

71. Which of the following is not true about feasibility?

A. It cannot be determined in a graphical solution of an LPP.
B. It is independent of the objective function.
C. It implies that there must be a convex region satisfying all the constraints.
D. Extreme points of the convex region give the optimum solution.

View answer

Correct answer: (A)
It cannot be determined in a graphical solution of an LPP.

72. In the canonical form of LPP if the objective function is of maximization, then all the constraints other than non-negativity conditions are _____.

A. greater than type.
B. lesser than type.
C. greater than or equal to type.
D. lesser than or equal to type.

View answer
Correct answer: (D)
lesser than or equal to type.

73. The non-negative variable which is added to LHS of the constraint to convert the inequality ≤ into equation is called _____.

A. random variable.
B. decision variable.
C. surplus variable.
D. slack variable.

View answer
Correct answer: (D)
slack variable.

74. In graphical method the LPP has unbounded solution if the solution space has

A. no upper boundary.
B. no lower boundary.
C. no boundary in the first quadrant.
D. none of the above.

View answer
Correct answer: (A)
no upper boundary.

75. The _____ is the method available for solving an L.P.P.

A. graphical method.
B. least cost method.
C. MODI method.
D. hungarian method.

View answer
Correct answer: (A)
graphical method.

76. The another term commonly used for activity slack time is _____

A. Total float.
B. Independent float.
C. Free float.
D. All the above.

View answer
Correct answer: (D)
All the above.

77. While drawing the network diagram for each activity project we should look _____

A. What acitivities preceede this acitivity.
B. What acitivities follow this acitivity.
C. What activity can concurrently take place with this activity.
D. All the above.

View answer
Correct answer: (D)
All the above.

78. Resource leveling is the process of _____ the utilization of resources in a project.

A. Emerging
B. Smoothing out.
C. Minimize
D. Maximize

View answer
Correct answer: (B)
Smoothing out.

79. Latest finish time that an activity can be finished without _____ the entire project.

A. Delaying.
B. Planning
C. Both a & b
D. None of the above

View answer
Correct answer: (A)
Delaying.

80. _____ phase identify manpower that will be responsible for each task.

A. Planning.
B. Scheduling.
C. Controlling.

D. All the above.

View answer
Correct answer: (B)
Scheduling.
Previous

81. In Transportation problem the preferred method of obtaining either optimal or very close to the optimal solution is _____.

A. .north west corner rule.
B. least cost method.
C. vogel's approximation method.
D. simplex method.

View answer
Correct answer: (C)
vogel's approximation method.

2. Transportation problem is said to be unbalanced if _____.

A. total supply is not equal to total demand.
B. Tot al supply is greater than total demand.
C. total supply is lesser than total demand.
D. All the above

View answer
Correct answer: (D)
All the above

83. In North West corner rule if the demand in the column is satisfied one must move to the _____.

A. left cell in the next column.
B. right cell in the next row.
C. right cell in the next column.
D. left cell in the next row.

View answer
Correct answer: (C)
right cell in the next column.

84. The assignment problem is said to be balanced if _____.

A. number of rows is greater than number of columns.
B. number of rows is lesser than number of columns.

C. number of rows is equal to number of columns.
D. if the entry of row is zero.

View answer
Correct answer: (C)
number of rows is equal to number of columns.

85. Vogel's approximation method is also known as _____.

A. Penalty method
B. North west method.
C. Least cost method
D. None of the above.

View answer
Correct answer: (A)
Penalty method

86. If A,B and C are matrices of the same order then _____.

A. (A+B)+C=A+(B+C).
B. (A+B)+C ≠ A+(B+C).
C. (A+B)+C> A+(B+C).
D. (A+B)+C < A+(B+C).

View answer
Correct answer: (A)
(A+B)+C=A+(B+C).

87. When the number of rows is not equal to the number of columns then the matrix is said to be _____.

A. unit matrix.
B. Rectangular matrix.
C. null matrix.
D. row matrix.

View answer
Correct answer: (B)
Rectangular matrix.

88. O.R. Stands for _____

A. Operations research
B. Open Report

C. Own Record
D. On Road

View answer
Correct answer: (A)
Operations research

89. Compound Interest is always _____ the Simple Interest.

A. Lesser than
B. Equal to
C. Greater than
D. None of the above.

View answer
Correct answer: (C)
Greater than

90. 3x- 4+7 = 0, then x = ?

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

View answer
Correct answer: (A)
-1

91. In Graphical solution the redundant constraint is _____.

A. which forms the boundary of feasible region.
B. which do not optimizes the objective function.
C. which does not form boundary of feasible region.
D. which optimizes the objective function.

View answer
Correct answer: (C)
which does not form boundary of feasible region.

92. In the standard form of LPP if the objective functions is of minimization then all the constraints _____.

A. equations.
B. inequalities.

C. greater than or equal to type.
D. lesser than or equal to type.

View answer
Correct answer: (A)
equations.

93. In a linear programming minimization model the objective function is to be _____.

A. minimized.
B. maximized.
C. minimized or maximized.
D. standardized.

View answer
Correct answer: (A)
minimized.

94. The graphical method is applicable to solve an L.P.P when there is _____.

A. Only one variable.
B. Two variables.
C. More than two variables
D. None of the above.

View answer
Correct answer: (B)
Two variables.

95. In the PERT network each activity time assumes a Beta distribution because _____

A. It is a unimodal distribution that provides information regarding the uncertainity of time estimates of activities.
B. It has got finite non-negative error.
C. It need not be symmetrical about model value .
D. All the above

View answer
Correct answer: (D)
All the above

96. In time cost trade off function analysis _____

A. Cost decreases linearily as time increases.
B. Cost at normal time is zero.
C. Cost increses linearily as time increases.
D. None of the above.

View answer
Correct answer: (A)
Cost decreases linearily as time increases.

97. _____ is the point in time that marks the beginning or ending of an activity.

A. Event.
B. Node.
C. Activity.
D. Dummy activity.

View answer
Correct answer: (A)
Event.

98. The CPM is used for completing the project that involves _____ of repetitive nature.

A. Activities
B. Node.
C. Event.
D. Dummy activity.

View answer
Correct answer: (A)
Activities

99. In Transportation problem the improved solution of the initial basic feasible solution is called _____.

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

View answer
Correct answer: (B)
optimal solution.

100. Transportation problem is said to be balanced if _____.

A. total supply is not equal to total demand.
B. total supply is greater than total demand.
C. total supply is lesser than total demand.
D. total supply is equal to total demand.

View answer
Correct answer: (D)
total supply is equal to total demand.

101. In transportation problem the solution is said to non-degenerate solution if occupied cells is _____.

A. greater than m+n-1.
B. lesser than m+n-1.
C. greater than or equal to m+n-1.
D. lesser than or equal to m+n-1.

View answer
Correct answer: (C)
greater than or equal to m+n-1.

102. In North West corner rule if the supply in the row is satisfied one must move _____.

A. down in the next row.
B. up in the next row.
C. right cell in the next column.
D. left cell in the next row.

View answer
Correct answer: (A)
down in the next row.

103. In assignment problem if number of rows is greater than column then _____.

A. dummy column is added.
B. dummy row added.
C. row with cost 1 is added.
D. column with cost 1 is added.

View answer
Correct answer: (A)
dummy column is added.

104. The transportation technique or simplex method cannot be used to solve the assignment problem because of _____.

A. degeneracy.
B. non-degeneracy.
C. square matrix.
D. any one of the above.

View answer
Correct answer: (A)
degeneracy.

105. If all the elements of a matrix are zeros, then the matrix is a _____.

A. unit matrix.
B. square matrix.
C. zero matrix.
D. none of these.

View answer
Correct answer: (C)
zero matrix.

106. A square matrix A is an orthogonal matrix x, if _____.

A. AA-1=I.
B. AA-1=I.
C. A=A-1.
D. A=A-1.

View answer
Correct answer: (B)
AA-1=I.

107. Principal (or) Present Value is denoted by

A. A
B. n
C. P
D. None of the above.

View answer
Correct answer: (C)
P

108. The simple interest on Rs 5,000 at 10& for 3 years is _____.

A. 500.
B. 1000.
C. 1500.
D. 2000.

View answer
Correct answer: (C)
1500.

109. The simple interest for Rs 10000 for 2 years at 10& is _____.

A. 200.
B. 3000.
C. 4000.
D. 2000.

View answer
Correct answer: (D)
2000.

110. In the canonical form of LPP if the objective function is of minimization then all the constraints other than non-negativity conditions are _____.

A. greater than type.
B. lesser than type.
C. greater than or equal to type.
D. lesser than or equal to type.

View answer
Correct answer: (C)
greater than or equal to type.

111. The non-negative variable which is added to LHS of the constraint to convert the inequality > into equation is called _____.

A. random variable.
B. decision variable.
C. surplus variable.
D. slack variable.

View answer
Correct answer: (C)
surplus variable.

112. Linear programming is _____.

A. a constraint optimization model.
B. a constraint decision making model.
C. a mathematical programming model.
D. all the above.

View answer
Correct answer: (D)
all the above.

113. The objective of network analysis is to _____.

A. Minimize total project duration.
B. Minimize total project cost.
C. Minimize product delays,interruption and conflicts
D. All the above.

View answer
Correct answer: (A)
Minimize total project duration.

114. Generally the PERT technique deals with the project of _____

A. Repetatative nature.
B. Non-repetative nature.
C. Determinstic nature.
D. None of the above.

View answer
Correct answer: (B)
Non-repetative nature.

115. The acitivity that can be delayed without affecting the execution of the immediate suceeding activity is determined by _____

A. Total float.
B. Independent float.
C. Free float.
D. None of the above.

View answer
Correct answer: (B)
Independent float.

116. If an activity has a zero slack, it implies that

A. It lies on the critical path
B. It is a dummy activity
C. Both a & b
D. None of the above

View answer
Correct answer: (A)
It lies on the critical path

117. A _____ is an endeavour to create a unique product service.

A. Project.
B. Network.
C. Activity.
D. Node.

View answer
Correct answer: (A)
Project.

118. In North West corner rule the allocation is done in _____

A. upper right corner.
B. middle cell in the transportation table.
C. cell with the lowest cost.
D. Upper left corner.

View answer
Correct answer: (D)
Upper left corner.

119. In transportation problem the solution is said to degenerate solution if occupied cells is

A. greater than m+n-1.
B. lesser than m+n-1.
C. greater than or equal to m+n-1.
D. lesser than or equal to m+n-1.

View answer
Correct answer: (B)
lesser than m+n-1

120. The assignment problem is said to be unbalanced if _____.

A. number of rows is greater than number of columns.
B. number of rows is lesser than number of columns.
C. number of rows is equal to number of columns.
D. both 1 and 2.

View answer
Correct answer: (D)
both 1 and 2.

121. Under simple interest, the interest for n years is _____.

A. $A=P(1+ni)$.
B. $A=P(+i)$.
C. $A=Pnr/100$.
D. $A=P(1+i)^n$.

View answer
Correct answer: (C)

$A=P(1+i)^n$.

122. Formula for Bankers gain is _____.

A. $Anr/100$.
B. $An^2r^2/100(100+nr)$.
C. $100A/100+nr$.
D. $Anr/100+nr$.

View answer
Correct answer: (B)

$An^2r^2/100(100+nr)$.

123. The formula for finding the compound interest is _____.

A. $A=P(1+ni)$.
B. $A=P(1+i)$.
C. $A=Pnr/100$.
D. $A=P(1+i)^n$.

View answer

Correct answer: (B)

$A=P(1+i)^n$.

124. The present value under annuity due is _____.

A. $A/i\ [1-(1+i)^{-n}]$.
B. $A+A/i\ [1-(1+i)^{-n}]$.
C. $A/i\ [(1+i)^{-n}-1]$.
D. $A/i\ (1+i)[\ 1+i)^{-n}-1]$.

View answer
Correct answer: (C)

$A/i\ (1+i)[\ 1+i)^{-n}-1]$.

125. In Graphical solution the feasible region is _____.

A. where all the constraints are satisfied simultaneously.
B. any one constraint is satisfied.
C. only the first constraint is satisfied.
D. any one of the above condition.

View answer
Correct answer: (A)
where all the constraints are satisfied simultaneously.

126. Under simple interest, amount or value at the end is _____.

A. $A=P+I$.
B. $A=P(1+i)$.
C. $A=Pnr/100$.
D. $A=P(1+i)^n$

View answer
Correct answer: (B)

$A=P+I$.

127. Which of the following is not associated with any LPP?

A. Feasible Solution.

B. Optimum Solution.
C. Basic solution.
D. Quadratic equation.

View answer
Correct answer: (D)
Quadratic equation.

128. The Amount due under immediate annuity is _____.

A. $A/i\ [1-(1+i)^{-n}]$.
B. $A+A/i\ [1-(1+i)^{-n}]$.
C. $A/i\ [(1+i)^{-n}-1]$.
D. $A/i\ (1+i)[\ (1+i)^{-n}-1]$.

View answer
Correct answer: (A)

$A/i\ (1+i)[\ (1+i)^{-n}-1]$.

129. Optimal solution in an LPP is _____.

A. which maximizes or minimizes the objective function.
B. which maximizes the objective function.
C. which minimizes the objective function.
D. which satisfies the non negativity restrictions.

View answer
Correct answer: (A)
which maximizes or minimizes the objective function.

130. Under simple interest, the rate of interest is given by _____.

A. R = 100r-(100-nr).
B. r = 100 I/Pn.
C. Anr/100.
D. A=P(1+i)n.

View answer
Correct answer: (D)

r = 100 I/Pn.

131. If there is only one column in a matrix, it is called _____.

A. Row matrix .
B. column matrix.
C. square matrix.
D. rectangular matrix.

View answer
Correct answer: (B)
column matrix.

132. C.I. stands for _____.

A. Compound Interest
B. Simple Interest
C. Rate Of Interest
D. No.of.years.

View answer
Correct answer: (A)
Compound Interest

133. In calculation of interest 'n' stands for

A. Rate of interset
B. Amount
C. Principal
D. No.of.years

View answer
Correct answer: (D)
No.of.years

134. The amount of time that is expected to complete the activity is called _____

A. Latest time.
B. Earliest time.
C. Most likely time.
D. Both a & b.

View answer
Correct answer: (C)
Most likely time.

135. In Transportation problem optimal solution can be verified by using _____.

A. north west corner rule.
B. least cost method.
C. MODI method.
D. matrix method.

View answer
Correct answer: (C)
MODI method.

136. The necessary and sufficient condition for the existence of a feasible solution to a transportation problem is a solution that satisfies all the conditions of _____.

A. supply.
B. demand.
C. supply and demand.
D. either supply or demand.

View answer
Correct answer: (C)
supply and demand.

137. If A = {1, 2, 3, 4, 5}, then the number of proper subsets of A is

A. 120
B. 30
C. 31
D. 32

View answer
Correct answer: (C)
31

138. Two finite sets have n and m elements. The number of elements in the power set of first set is 48 more than the total number of elements in power set of the second set. Then the values of m and n are

A. 6, 4
B. 7, 6
C. 6, 3
D. 7, 4

View answer

Correct answer: (A)
6, 4

139. If a class with n students is organized into four groups keeping the following conditions
Each student belongs to exactly two groups
Each pair of groups has exactly one student in common, what is the value of n?

A. n = 11
B. n = 7
C. n = 9
D. None of these

View answer
Correct answer: (D)
None of these

140. In a recent survey conducted by cable T.V., among the people who watch DD, ZEE and STAR TV., it is found that 80 % of the people watched DD, 22% watched Star TV, and 15 % o watched Zee. What is the maximum percentage of people, who can watch all the three channels?

A. 12.5 %
B. 8.5 %
C. 15 %
D. Data insufficient

View answer
Correct answer: (C)
15 %

141. If $f(x) = \text{Log } [(1 + x)/(1-x)$, then $f (2x)/(1 + x^2)$ is equal to

A. 2 f (x)
B. $\{f(x)\}^2$
C. $\{f(x)\}^3$
D. 3 f(x)

View answer
Correct answer: (A)
2 f (x)

142. If f(x) = c.x +1 and g(x)= 3x+2. If f(g(x)) = g(f(x))then what is the value of c?

A. 1

B. 2
C. 3
D. 4

View answer
Correct answer: (B)
2

143. Evaluate f(1) + f(2) + f(3) + ... + f(25)

A. -26
B. None of these
C. -24
D. -22

View answer
Correct answer: (B)
None of these

144. The range of the real function f defined by f (x) = √(x -1) =

A. (1,∞)
B. (0,1)
C. [0,∞)
D. (∞,0]

View answer
Correct answer: (C)
[0,∞)

145. { (a, b): $a^2 + b^2 = 1$} on the set S has the following relation

A. symmetric
B. reflexive and transitive
C. none
D. reflexive

View answer
Correct answer: (A)
symmetric

146. Let R= {(x,y) :x, y belong to N, 2x+y =41}. The range is of the relation R is

A. {(2n +1):n belongs to N , 1≤n≤20}
B. {2n: n belongs to N, 1< n< 20}

C. {(2n-1) : n belongs to N, 1≤n≤20}
D. { (2n+2) : n belongs to N, 1< n <20}

View answer
Correct answer: (C)
{(2n-1) : n belongs to N, 1≤n≤20}

147. Insert A.M.'s (Arithmetic Mean) between 7 and 71 in such a way that the 5^{th} A.M. is 27. The number of A.M.s are

A. 12
B. 17
C. 15
D. 51

View answer
Correct answer: (B)
17

148. A car travels 432 km on 48 litres of petrol. How far will it travel on 20 litres of petrol?

A. 18
B. 9
C. 34
D. 180

View answer
Correct answer: (D)
180

149. If log 27 = 1.431, then the value of log 9 is:

A. 0.934
B. 0.958
C. 0.945
D. 0.954

View answer
Correct answer: (D)
0.954

150. If a = 1 + i , then a^2 equals

A. 1 - i

B. 2i
C. (1 + i)(1 - i)
D. i - 1

View answer
Correct answer: (B)
2i

151. If a = cos θ + I sin θ, then (1 + a) / (1 – a) =

A. cot θ / 2
B. cot θ
C. i cot θ / 2
D. i tan θ / 2

View answer
Correct answer: (C)
i cot θ / 2

152. The sum of all odd numbers between 100 and 200 is

A. 7,000
B. 8,000
C. 8,500
D. 7,500

View answer
Correct answer: (D)
7,500

153. If n arithmetic means are inserted between 1 and 31, such that the ratio of the first mean and the nth mean is 3 : 29, then the value of n is

A. 10
B. 12
C. 13
D. 14

View answer
Correct answer: (D)
14

154. If in an infinite G.P., the first term is equal to the sum of all successive terms then its common ratio is

A. 1 / 10
B. 1 / 11
C. 1 / 9
D. 1 / 20

View answer
Correct answer: (B)
1 / 11

155. Cube root of 5 x cube root of 7 is

A. Cube root of 35
B. Cube root of 12
C. Cube root of 7 / 5
D. Cube root of 2

View answer
Correct answer: (A)
Cube root of 35

156. From 8 gentlemen and 4 ladies, a committee of 5 is to be formed. In how many ways can this be done so as to include at least one lady?

A. 736
B. 728
C. 280
D. 792

View answer
Correct answer: (A)
736

157. The greatest possible number of points of intersection of 8 straight lines and 4 circles is

A. 32
B. 64
C. 76
D. 104

View answer
Correct answer: (C)
76

158. Find the compound interest for Rs 10000 for 2 years at 5% per annum the interest being compounded annually.

A. Rs 1000
B. Rs 1025
C. Rs 1050
D. Rs 1100

View answer
Correct answer: (B)
Rs 1025

159. How many numbers greater than 10 lakhs be formed from 2, 3, 0, 3, 4, 2, 3?

A. 420
B. 360
C. 400
D. 300

View answer
Correct answer: (B)
360

160. If Ram has 3 tickets of a lottery for which 10 tickets were sold and 5 prizes are to be given, the probability that he will win at least one prize is

A. 7/12
B. 9/12
C. 1/12
D. 11/12

View answer
Correct answer: (D)
11/12