BCOM SECOND SEMESTER QUANTITATIVE OF BUSINESS

QUESTION BANK

1. Operations research analysts do not
a) Predict future operations
b) Build more than one model
c) Collect relevant data
d) Recommend decision and accept
2. Decision variables are
a) Controllable
b) Uncontrollable
c) Parameters
d) None of the above
3. A model is
a) An essence of reality
b) An approximation
c) An idealization'
d) All of the above
4. A physical model is an example of
a) An iconic model
b) An analogue model
c) A verbal model
d) A mathematical model
5. Every mathematical model
a) Must be deterministic
b) Requires computer aid for solution.
c) Represents data in numerical form
d) All of the above
6. Operations research approach is
a) Multi disciplinary
b) Scientific
c) Intuitive
d) All of the above
7. An optimization model
a) Mathematically provides best decision
b) Provides decision with limited context

c) Helps in evaluating various alternatives constantly
d) All of the above
8. OR provides solution only if the elements are
a) Quantified
b) Qualified
c) Feasible
d) Optimal
9. The name management science is preferred by
a) Americans
b) English
c) French
d) Latin
10. Operations research is applied
a) Military
b) Business
c) Administration'
d) All of the above
11. The application of OR techniques involves …… approach
a) Individual
b) Team
c) Critical
d) None of the above
12. OR techniques helps to find ……..solution
a) Feasible
b) Non feasible
c) Optimal
d) Non optimal
13. Modern scientific management research originated during ……
a) World war II
b) World war I
c) 1990
d) 1993
14. ……. helps management to evaluate alternative course of action for selecting the best
course of action
a) Operations research
b) Quantitative technique
c) Management research
d) None of the above

15. ……. Theory is an important operations research technique to analyze the queuing
behaviour.
a) Waiting line
b) Net work
c) Decision
d) Simulation
16. …….. is an important Operations research technique to be used for determining
optimal allocation of limited resources to meet the given objectives.
a) Waiting line theory
b) Net work analysis
c) Decision analysis
d) Linear programming
17. …… model involves all forms of diagrams
a) iconic
b) mathematical
c) analogue
d) schematic
18. An organization chart is an example of
a) Iconic
b) Mathematical
c) Analogue
d) None of the above
19. …. Is known as symbolic model
a) Iconic
b) Mathematical
c) Analogue
d) None of the above
20. A map indicates roads, highways, towns and the interrelationship is an ……model
a) Iconic
b) mathematical
c) analogue
d) none of the above
21. ……..models in which the input and output variables follow a probability distribution.
a) Iconic
b). mathematical
c). analogue

d) Deterministic model
22. ……. Example of probabilistic model
a) Game theory
b) Charts
c) Graphs
d) All the above
23. ……..is a method of analyzing the current movement of the same variable in an effort
to predict the future movement of the same variable.
a) Goal programming
b) Markov analysis
c) Replacement theory
d) Queuing theory
24. Constraints in an LP model represent
a) Limitations
b) Requirements
c) Balancing limitation
d) all of the above
25. Linear programming is a
a) Constraint optimization technique
b) Technique for economic allocation of limited resources.
c) Mathematical technique
d) all of the above
26. A constraint in an LP model restricts
a) Value of objective function
b) Value of decision variable
c) Use of available resource
d) all of the above
27. The best use of linear programming technique is to find an optimal use of
a) Money
b) Man power
c) Machine
d) all of the above
28. Which of the following as an assumption of an LP model
a) Divisibility
b) Proportionality
c) Additively
d) all of the above
29. Most of the constraints in the linear programming problem are expressed as
…….

a) Equality
b) Inequality
c) Uncertain
d) all of the above
30. The graphical method of LP problem uses
a) Objective function equation
b) Constraint equation
c) Linear equations
d) All the above
31. A feasible solution to a linear programming problem
a) Must satisfy all problem constraints simultaneously
b) Need not satisfy all constraints
c) Must be a corner point of the feasible region
d) Must optimize the value of the objective function
32. While plotting constraints on a graph paper, terminal points on both axes are connected
by a straight line because
a) The resources are limited in supply
b) The objective function is a linear function
c) The constraints are linear equations or in equalities
d) all of the above
33. Constraints in LP problem are called active if they
a) Represent optimal solution
b) At optimality do not consume all the available resources
c) Both of (a) and (b)
d) None of the above
34. The solution space of a LP problem is unbounded due to
a) An incorrect formulation of the LP model
b) Objective function is unbounded
c) Neither (a) nor (b)
d) Both (a) and (b)
35. While solving LP problem graphically, the area bounded by the constraints is called
a) Feasible region
b) Infeasible region
c) Unbounded solution
d) None of the above
36. Which of the following is not a category of linear programming problems?
a) Resource allocation problem
b) Cost benefit trade off problem

c) Distribution network problem
d) All of the above are categories of linear programming problems.
37. A linear programming model does not contain which of the following components?
a) Data
b) Decisions
c) Constraints
d) A spread sheet
38. Which of the following may not be in a linear programming formulation?
a) <=.
b) >.
c) =.
d) All the above
39. While solving an LP problem infeasibility may be removed by
a) Adding another constraint
b) Adding another variable
c) Removing a constraint
d) Removing a variable
40. Straight lines shown in a linear programming graph indicates
a) Objective function
b) Constraints
c) Points
d) All the above
41. All negative constraints must be written as
a) Equality
b) Non equality
c) Greater than or equal to
d) Less than or equal to
42. In linear programming problem if all constraints are less than or equal to, then the
feasible region is
a) Above lines
b) Below the lines
c) Unbounded
d) None of the above
43……. is a series of related activities which result in some product or services.
a) Network
b) transportation model
c) assignment
d) none of these

44. Any activity which does not consume either any resource or time is called ……..activity.
a) Predecessor
b) Successor
c) Dummy
c) End
45. An activity which must be completed before one or more other activities start is known
as …….activity.
a) Predecessor
b) Successor
c) Dummy
c) End
46. Activities that cannot be started until one or more of the other activities are completed,
but immediately succeed them are called ……activities
a) Predecessor
b) Successor
c) Dummy
c) End
47. An event which represents the beginning of more than one activity is known as ……..event.
a) Merge
b) Net
c) Burst
d) None of the above
48. If two constraints do not intersect in the positive quadrant of the graph, then
a) The problem is infeasible
b) The solution is unbounded
c) One of the constraints is redundant
d) None of the above
49. Constraint in LP problem are called active if they
a) Represent optimal solution
b) At optimality do not consume all the available resources
c) Both of (a) and (b)
d) None of the above
50. Alternative solutions exists of an LP model when
a) One of the constraints is redundant.
b) Objective function equation is parallel to one of the constraints
c) Two constraints are parallel.

d) all of the above
51. While solving an LP problem, infeasibility may be removed by
a) Adding another constraint
b) Adding another variable
c) Removing a constraint
d) Removing a variable
52……..is that sequence of activities which determines the total project time.
a) Net work
b) Critical path
c) Critical activities
d) None of the above
53. Activities lying on the critical path are called…….
a) Net work
b) Critical path
c) Critical activities
d) None of the above
54. It ……. at which an activity can start.
a) EST
b) EFT
c) LST
d) LFT
55…… is the earliest starting time plus activity time.
a) EST
b) EFT
c) LST
d) LFT
56. ……. is the latest time by which an activity can be started without delaying the
completion of the project.
a) EST
b) EFT
c) LST
d) LFT
57. …….is the latest time by which an activity can be finished without delaying the
completion of the project.
a) EST
b) EFT
c) LST
d) LFT

58. ……is the duration by which an activity can be delayed without delaying the
project
a) Slack
b) Total float
c) Free float
d) Independent float
59. …… is the time by which the completion of an activity can be delayed beyond its
earliest finish time without affecting the earliest start time of a succeeding activity
a) Slack
b) Total float
c) Free float
d) Independent float
60. …….is activity oriented.
a) CPM
b) PERT
c) LP
d) None of the above
61. ……. is event oriented.
a) CPM
b) PERT
c) LP
d) None of the above
62. PERT emphasis on ……..
a) Time
b) Activity
c) a) and b)
d) None of the above
63. Full form of PERT is
a) Performance evaluation review technique
b) Programme Evaluation Review technique
c) Programme Evaluation Research Technique
d) None of these.
64. …….. is a scheme or design of something intended or device.
a) Programme
b) Project
c) Network
d) Float

65. An activity which must be completed before one or more other activities start is known
as ……activity.
a) Dummy
b)Predecessor
c) Successor
d) None of these
66. The event is commonly represented by …… in network diagram
a) Nodes
b) Arrow
c) Triangle
d) None of these
67. …….is the disconnection of an activity before the completion of activities in a project
network diagram.
a) Dangling
b) Looping
c) Dummy
d) None of the above
68……..is an activity oriented diagram.
a) CPM
b) PERT
c) Histogram
d) None of the above
69. …… is the duration by which an activity can be delayed without delaying the
project.
a) Total float
b) Slack
c) Earliest event time
d) None of these
70. ……is the shortest possible time in which an activity can be delayed without delaying the project.
a) Pessimistic time estimate
b) Optimistic time estimate
c) Most likely time estimate
d) None of these
71. Which of the following is not a part of decision tree problem specification?
a) a list of alternatives
b) A list of possible state of nature

c) EVPI
d) Pay off associated with alternative/ state of nature combination.
72. If a decision theory problem has 3 decision alternatives and 4 states of nature, the
number of payoffs in that problem will be
a)3 b) 4 c) 12 d) 64
73. In a decision theory problem under complete uncertainty, which one of the following
approaches will not be possible?
a) Expected monetary value
b) Maxmin
c) Minimax
d)Hurwicz
74. For decision making under uncertainty, identify the decision rule that is appropriate
for the optimist.
a) Laplace
b) Maximax
c) Minimax regret
d)Maxmin
75. What decision-making condition must exist for the decision tree to be a valuable tool?
a) Certainty
b) Uncertainty
c) Risk
d) It does not matter, the tool is appropriate in all environments
76. Which of the following is (are) types of decision-making environments?
a)Decision making under uncertainty
b) Decision making under certainty
c) Decision making under risk
d) None of the above
77. A good decision always implies that
a) Will obtain the best final results
b) Have used appropriate quantitative analysis.
c) Have considered all alternatives
d) Have followed a logical process.
78. All of the following are steps in the decision-making process EXCEPT
a) Define the problem
b) List alternatives
c) Identify the possible outcomes

d) Compute the posterior probabilities.
79. The equally likely decision criteria is also known as
a) Bayes
b) Laplace
c) Minimax
d) Hurwicz
80. Opportunity loss refers to
a) The expected value of a bad decision
b) The expected loss from a bad decision
c) The difference between actual pay off and the optimal pay off
d) The regret from not having made a decision
81. The criteria of expected monetary value is used for making decisions under
a) Certainty
b) Uncertainty
c) Risk
d) all of the above
82. The maximax criteria is……..
a) Optimistic
b) Neutral
c) Pessimistic
d) Can be any one of the above
83. Which of the following might be viewed as an optimistic decision criterion?
a) Hurwicz criterion
b) Maximin
c) Maximax
d) Minimax
84. The minimum EOL will always result in the same decision as
a) Minimax
b) Maximin
c) Maximum EMV
d) Maximax
85. Decision theory is concerned with
a) Methods of arriving at an optimal decision
b) Selecting optimal decision in sequential manner
c) Analysis of information that is available
d) All of the above
86. Which of the following criterion is not used for decision making under uncertainty?
a) Maximin
b) Maximax

c) Minimax
d) Minimize expected loss
87. The minimum expected opportunity loss is
a) Equal to EVPI
b) Minimum regret
c) Equal to EMV
d) Both (a) and (b)
88. The expected value of perfect information is equal to
a) EPPI – Minimum EMV
b) EPPI + Maximum EMV
c) Maximum EOL
d) None of the above
89. The value of the coefficient of optimism is needed while using the criterion of
a) Equally likely
b) Maximin
c) Realism
d) Maximin
90. while using Hurwicz criterion, the coefficient of realism
a) Represents the degree of optimism
b) Represents the degree of pessimism
c) Is the probability of state of nature
d) None of the above
91. The decision making criteria that should be used to achieve maximum long term pay off is
a) EOL
b) EMV
c) Hurwicz
d) Maximax
92. Game theory models are classified by the
a) Number of players
b) Sum of all payoff
c) Number of strategies
d) All of the above
93. The objective of network analysis is to
a) Minimize total project duration
b) Minimize total project cost
c) Minimize production delays, interruption and conflicts
d) All of the above
94. The initial solution of a transportation problem can be obtained by applying any

known method. But the only condition is
a) The solution be optimal
b) The rim conditions are satisfied
c) The solution not be degenerate
d) All of the above
95. 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

ANSWER KEY

1. A) 2. A) 3.d) 4. A) 5. C) 6. A) 7. D)
8. A) 9. A) 10. D) 11. B) 12. C) 13.A) 14. A)
15. A) 16. D) 17. A) 18. C) 19. B) 20.C) 21. D)
22. A) 23.B) 24. D) 25. D) 26.D) 27. D) 28. D)
29.B). 30. D) 31. A) 32. C) 33. A) 34. C) 35. A)
36.D) 37.D) 38.B) 39. C) 40. B) 41. C) 42. B)
43. A) 44.C) 45. A) 46. B) 47. C) 48. D) 49. A)
50 B) 51.C) 52. B) 53.C) 54. A) 55. B) 56. C)
57. D) 58.B) 59. C) 60. A) 61.B) 62. A) 63. A)
64. C). 65. B) 66. A) 67. C) 68. A) 69. A) 70. B)
71.C) 72. C) 73. A) 74. B) 75. C) 76. B) 77. D)
78.D) 79. B) 80. C) 81.D) 82. C) 83. C) 84. C)
85.D) 86.D) 87.D) 88.A) 89. C) 90. A) 91.B)
92. D) 93.A) 94. B) 95.A)