TEE/BBAC501/2019/2021 - 22

BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Bachelor of Business Administration
Course Name – Quantitative Techniques in Management
Course Code - BBAC501
(Semester V)

Time : 1 Hr.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

(1) There is a great scope for …………………….…… working as a team to solve problems of defense by using the Operations Research approach

a) Economists
b) Administrators
c) Statisticians and Technicians
d) All of these

(2) Linear Programming technique is used to allocate scarce resources in an optimum man ner in problems of …………………….?

a) Schedule
b) Product Mix
c) Both Economists and Product Mix
d) Servicing Cost

(3) Allocation problems can be solved by

a) Linear Programming Technique
b) Non – Linear Programming Technique
c) Both Linear Programming Technique and No n – Linear Programming Technique
d) None of these

(4) In …………………….. models, everything is defined and the results are certain

a) Deterministic Models
b) Probabilistic Models
c) Both Deterministic Models and Probabilistic Models
d) None of these

(5) Operations Research approach is

a) Multi -disciplinary
b) Scientific
c) Initiative
d) All of these

(6) Which of the following is a property of all linear programming problems?

a) alternate courses of action to choose from
b) minimization of some objective
c) usage of graphs in the solution
d) usage of linear and nonlinear equations and i nequalities

(7) In a transportation problem, items are allocated from sources to destinations

a) at a maximum cost

b) at a minimum cost

c) at a minimum profit

d) at a minimum revenue

(8) A basic feasible solution is called ------ if the value of at least one basic variable is zero

a) Degenerate

b) Non degenerate

c) Optimum

d) None of these

(9) Which of the following is true :

a) An assignment problem can be solved by enumeration method

b) An assignment problem can be solved by transportation method

c) An assignment problem can be solved by Hungarian method

d) All of these

(10) The initial solution to a transportation problem can be generated in any manner, so long as

a) it minimizes cost

b) all supply and demand are satisfied

c) degeneracy does not exist

d) all cells are filled

(11) Which of the following statements about the northwest corner rule is false?

a) One must exhaust the supply for each row before moving down to the next row

b) One must exhaust the demand requirements of each column before moving to the next column

c) When moving to a new row or column, one must select the cell with the lowest cost.

d) One must check that all supply and demand constraints are met.

(12) In transportation model analysis the stepping-stone method is used to

a) obtain an initial optimum solution

b) obtain an initial feasible solution

c) evaluate empty cells for potential solution improvements

d) evaluate empty cells for possible degeneracy

(13) The total cost of the optimal solution to a transportation problem

a) is calculated by multiplying the total supply (including any dummy values) by the average cost of the cells

b) cannot be calculated from the information given

c) is found by multiplying the amounts in each cell by the cost for that cell for each row and then subtract the products of the amounts in each cell times the cost of each cell for the columns

d) can be calculated based only on the entries in the filled cells of the solution

(14) The stepping-stone method

a) is an alternative to using the northwest corner rule

b) often involves tracing closed paths with a triangular shape

c) is used to evaluate the cost effectiveness of shipping goods via transportation routes not currently in the solution

d) helps determine whether a solution is feasible or not

(15) In a minimization problem, a positive improvement index in a cell indicates that

a) the solution is optimal

b) the total cost will increase if units are reallocated to that cell

c) the total cost will decrease if units are reallocated to that cell

d) there is degeneracy

(16) MODI method is used to obtain ---------------

a) Optimal solutions

b) Optimality test

c) Both Optimal solutions and Optimality test

d) Optimization

(17) For solving an assignment problem, which method is used?

a) Hungarian b) American

c) German d) All

(18) A feasible solution is called a basic feasible solution if the number of non-negative allo cations is equal to.........................

a) m-n+1 b) m-n-1

c) m+n-1 d) None of these

(19) The allocated cells in the transportation table are called ....

a) Occupied cells b) Empty cells

c) Both Occupied cells and Empty cells d) Unoccupied cells

(20) VAM stands for ....

a) Vogel's Approximation Method b) Vogel's Approximate Method

c) Vangel's Approximation Method d) Vogeal's Approximation Method

(21) .In a Transportation Problem, if the number of non-negative independent allocation i s .... than m+n-1

a) Equivalent b) Greater

c) Less d) None of these

(22) For maximization in TP , the objective is to maximize the total ....

a) Solution b) Profit Matrix

c) Profit d) None of these

(23) PERT stands for

a) Positive Error Reporting Time b) Programme Evaluation Review Technique

c) Programme Evaluation and Research Theory d) Process Evaluation and Research Technique

(24) Which of the following statements concerning CPM activities is false?

a) The late finish of an activity is the earliest late start of all preceding activities. b) The early finish of an activity is the early start of that activity plus its duration.

c) The late finish is the earliest of the late start times of all successor activities d) The late start of an activity is its late finish less its duration.

(25) PERT & CPM are

a) Statistical tool b) Time-even tool

c) Network Analysis d) All of these.

(26) Which of the following statements regarding critical paths is true?

a) The shortest of all paths through the network is the critical path. b) Some activities on the critical path may have slack

c)
Every network has exactly one critical path d) On a specific project, there can be multiple critical paths, all with exactly the same duration.

(27) A dummy activity is required when

a) Two or more activities have the same starting events b) Two or more activities have different ending events

c) Two or more activities have the same ending events d) The network contains two or more activities that have identical starting and ending events

(28) The critical path of a network is the

a) Path with the fewest activities b) Shortest time path through the network.

c) Longest time path through the network. d) Path with the most activities.

(29) The critical path

a) is any path that goes from the starting node t b) is a combination of all paths

o the completion node

c) is the shortest path.   d) is the longest path.

(30) Mark the wrong statement.

a)
The head event of an activity also represents tail event of its predecessor activity

b) Nodes should be numbered in such a way th at, for every activity, the initial node bears a lower number while final node bears a highe r number.

c) The event marking start of an activity called head event and the event marking the end is t ermed as tail-event.

d) The event marking start of an activity called head event and the event marking the end is termed as tail-event

(31) Pick the wrong relationship:

a) Interfering float = Total float – Free float   b) Total float =Free float + Independent float

c) Total float ≥ Free float ≥ Independent float   d) Free float = Total float – Head event slack

(32) An activity which starts immediately after one or more of the other activities are compl eted is known as

a) Successor activity   b) Predecessor activity

c) Dummy activity   d) None of these

(33) PERT analysis is based on

a) optimistic time   b) pessimistic time

c) most likely time   d) all these

(34) Which of the option is not a notable challenge while scheduling a project?

a) Deadlines exist.   b) Independent activities

c) Too many workers may be required.   d) Costly delay

(35) The particular task performance in CPM is known

a) Dummy   b) Event

c) Activity   d) Contract.

(36) The earliest start time rule

a) Compares the activities starting time for an a ctivity successor.

b) Compares the activities end time for an activ ity predecessor.

c) Directs when a project can start.   d) Regulates when a project must begin

(37) Activities A, B, and C are the immediate predecessors for Y activity. If the earliest finis h times for the three activities are 12, 15, and 10, then the earliest start time for Y will be

a) 10   b) 15

c) 12   d) Cannot be determined

(38) While scheduling a project by CPM

a)
A project is divided into various activities

b) Required time for each activity is establishe d

c) A sequence of various activities is made acc ording to their importance

d)
All these

(39) Which of the following is not a phase of project management?

a) Project planning   b) Project scheduling

c) Project controlling   d) Project being

(40) The shortest possible time in which an activity can be achieved under ideal circumstan ces is known as _____

a) Pessimistic time estimate   b) Optimistic time estimate

c) Expected time estimate   d) The most likely time estimate

(41) The latest finish time for an activity:

a) equals the min. of LFT − t for all immediate successors

b) equals the max. of EST + t for all immediate predecessors.

c) equals the min. of EST + t for all immediate successors.

d) equals the max. of LFT − t for all immediate predecessors

(42) Pick up the correct statement from the following :

a) Programme Evaluation and Review Techniq ue, is event oriented

b) Programme Evaluation and Review Techniq ue is not event oriented

c) Critical Path Method is event oriented

d) Critical Path method is event oriented.

(43) The performance of a specific task in CPM, is known

a) Dummy

b) Event

c) Contract

d) Activity

(44) Network models such as PERT and CPM are used to

a) manage complex projects

b) save time

c) save money.

d) All these

(45) In PERT, the time estimate b represents

a) the optimistic time.

b) The most likely time

c) the pessimistic time

d) the expected time.

(46) A good decision always implies that we

a) will obtain the best final results.

b) have used appropriate quantitative analysis.

c) have considered all alternatives.

d) have followed a logical process.

(47) All of the following are steps in the decision-making process EXCEPT:

a) Define the problem

b) List alternatives

c) Compute the posterior probabilities

d) List payoffs

(48) Any problem that can be represented in a decision table can also be graphically illustrat ed in a:

a) utility curve.

b) Bayes' diagram

c) decision tree.

d) Hurwicz diagram.

(49) Opportunity loss refers to

a) the expected value of a bad decision

b) the expected loss from a bad decision

c) the difference between the actual payoff and the optimal payoff

d) the regret from not having made a decision.

(50) The criteria of Expected Monetary Value is used for making decisions under

a) Certainty.

b) uncertainty.

c) risk.

d) All of these

(51) The maximin criteria is a(n) _____ criteria.

a) optimistic

b) neutral

c) pessimistic

d) can be any one of the above depending on th e problem

(52) Which of the following might be viewed as an "optimistic" decision criterion?

a) Hurwicz criterion

b) maximin

c) maximax

d) minimax

(53) The minimum EOL will always result in the same decision as:

a) Minimax

b) Maximin

c) maximum EMV

d) maximax

(54) What are characteristics of a programmed decision?

a) Complex and risky

b) Uncertain and non-routine

c) Low risk and certain

d) Routine and non-complex

(55) Of what is an investment decision an example?

a) Programmed decision

b) Routine decision

c) Management decision

d) Non-programmed decision

(56) What is not an assumption underpinning the rational decision making model?

a) Incomplete information

b) An agreed goal

c) A structured problem

d) High level of certainty regarding the environ ment

(57) Simon (1960) is associated with what type of decision making model?

a) Rational

b) Classical

c) Programmed

d) Administrative

(58) What is intuitive decision making based on?

a) Guesswork

b) Gambling

c) Instinct

d) Rationality

(59) Which of these does not form part of the key streams identified by March (1988) in decision making in highly ambiguous environments?

a) Expectations

b) Choice opportunities

c) Problems

d) Solutions

(60) What is the term for the 'rule of thumb' type of bias in decision making?

a) Framing bias

b) Hindsight bias

c) Over-confidence bias

d) Heuristics