1. The research process is best described as a:
   A  Method to select a frame of reference
   B  Set of rules that govern the selection of subjects
   C  Series of steps completed in a logical order
   D  Plan that directs the research design

2. A research proposal is best described as a(n):
   A  Framework for data collection and analysis
   B  Description of the research process for a research project
   C  Description of how the researcher plans to maintain an ethical perspective during the study
   D  Argument for the merit of the study

3. The purpose of a literature review is to:
   A  Use the literature to identify present knowledge and what is unknown
   B  Assist in defining the problem and operational definition
   C  Identify strengths and weaknesses of previous studies
   D  All of the above

4. The statement 'To identify the relationship between the time the patient spends on the operating table and the development of pressure ulcers' is best described as a research:
   A  Objective
   B  Aim
   C  Question
   D  Hypothesis
5. An operational definition specifies:
   A  The data analysis techniques to be used in the study
   B  The levels of measurement to be used in the study
   C  How a variable or concept will be defined and measured in the study
   D  How the outcome of the research objectives for the study will be measured

6. A statement of the expected relationship between two or more variables is known as the:
   A  Concept definition
   B  Hypothesis
   C  Problem statement
   D  Research question

7. In a qualitative research proposal you would not expect to see a:
   A  Research question
   B  Research aim
   C  Hypothesis
   D  Operational definition

8. 'Relaxation therapy is more effective than standard patient education alone in decreasing pre-operative anxiety' is an example of a:
   A  Null hypothesis
   B  Non-directional hypothesis
   C  Complex hypothesis
   D  Directional hypothesis
9. 'There is no difference in the incidence of phlebitis around intravenous cannulae changed every 72 hours and those changed at 96 hours' is an example of a:

A Null hypothesis
B Directional hypothesis
C Non-directional hypothesis
D Simple hypothesis

10. Which of the following statements meets the criteria for a researchable question?

A Is the use of normal saline to cleanse wounds harmful to patients?
B Do generalist registered nurses meet the mental health needs of general patients?
C What are the patients' perceptions of the effectiveness of pre-operative education for total hip replacement?
D Do palliative care patients have spiritual needs?

11. The researcher needs to clearly identify the aim of the study; the question to be answered; the population of interest; information to be collected, and feasibility in order to decide on the research:

A Design and method
B Purpose and assumptions
C Design and assumptions
D Purpose and data analysis

12. A variable that changes due to the action of another variable is known as the:

A Independent variable
B Extraneous variable
C Dependent variable
D Complex variable
1 Any nonroutine opportunity in which employees must search for alternative solutions is called:

A) a nonprogrammed decision.
B) satisfying.
C) an implicit favourite.
D) post decisional justification.
E) escalation of commitment.

2 What decision making process allows people to select the preferred solution without the need to identify or evaluate alternative choices?

A) Scenario planning
B) Programmed decision
C) Escalation of commitment
D) Satisficing
E) Systematic evaluation

3 According to the rational choice decision making process, what should occur immediately after identifying the problem?

A) Develop alternative solutions
B) Choose the best alternative
C) Choose the best decision process
4 A conscious process of making choices among one or more alternatives with the intention of moving toward some desired state of affairs is:

A) a problem.
B) decision making.
C) an opportunity.
D) a symptom.
E) diagnostic skill.

5 A deviation between the current and the desired situation is:

A) expected utility.
B) feedback.
C) an emotion.
D) a problem.
E) rational choice.

6 The rational choice model of decision making is often NOT used because:

A) it ignores the fact that emotions also influence the decisionmaking process.
B) people cannot or will not process the large amount of information needed to identify the best solution.
C) people have difficulty recognizing when their choices have failed.
D) people have difficulty recognizing problems.
E) all of the above.
7 The argument that people process limited and imperfect information and rarely select the best choice is referred to as:
A) maximization.
B) implicit favourite.
C) intuition.
D) bounded rationality.
E) scenario planning.

8 In contrast to the rational choice model of decision making, organizational scholar, Herbert Simon argued that people process limited and imperfect information. Herbert Simon was suggesting that people engage in:
A) maximization.
B) scenario planning.
C) bounded rationality.
D) intuition.
E) self-justification.

9 Which of the following refers to the tendency to select a solution that is “good enough” rather than “the best”?
A) Post-decisional justification
B) Satisficing
C) Selective attention
D) Evaluation apprehension
E) Maximizing

10 Which of the following refers to the ability to know when a problem or opportunity exists and to select the best course of action without conscious reasoning?
11 The perceptual distortion that involves justifying choices by unconsciously inflating the quality of the selected option and deflating the quality of the discarded option is:

A) scenario planning.
B) post-decisional justification.
C) intuition.
D) escalation of commitment.
E) prospect theory.

12 Which of these is the tendency to repeat an apparently bad decision or allocate more resources to a failing course of action?

A) Programmed decision
B) Satisficing
C) Selective attention
D) Post-decisional justification
E) Escalation of commitment

13 Separating decision choosing from decision evaluation tends to:

A) minimize escalation of commitment.
B) increase satisficing.
C) discourage intuition.
D) increase the use of programmed decision-making.
E) decrease satisficing.

**ANSWER FOR MCQ**

1-A 2-B 3-C 4-B 5-D 6-E 7-D 8-C 9-B 10-C 11-B 12-E 13-A

1 Resource-allocation problems have constraints for each limited resource.
   A) True
   B) False

2 A resource constraint has a >= sign in a linear programming model.
   A) True
   B) False

3 Transportation problems typically have mostly <= constraints.
   A) True
   B) False

4 Which of the following is not a category of linear programming problems?
   A) Resource-allocation problems.
   B) Cost-benefit-trade off problems.
   C) Distribution-network problems.
   D) b and c.
   E) All of the above are categories of linear programming problems.
5 A linear programming model does not contain which of the following components?

A) Data.
B) Decisions.
C) Constraints.
D) Measure of performance.
E) A spreadsheet.

6 Which of the following may not be in a linear programming formulation?

A) <=.
B) >.
C) =.
D) a. and c. only.
E) All of the above.

7 Transportation problems have the following type of constraints:

A) >=.
B) <=.
C) >.
D) <.
E) None of the above.

8 Resource-allocation problems typically have which of the following type of constraints:

A) >=.
B) <=.
9 Cost-benefit trade off problems typically have which of the following type of constraints:
   A) >=.
   B) <=.
   C) =.
   D) None of the above.
   E) All of the above.

10 Mixed problems may not have which of the following type of constraints:
   A) >=.
   B) <=.
   C) =.
   D) All of the above.
   E) None of the above.

11 Which of the following is an assumption of assignment problems?
   A) The number of assignees and the number of tasks are the same
   B) The objective is to minimize the number of assignments not made.
   C) Each task is to be performed by exactly one assignee.
   D) a. and c. only.
   E) None of the above.
ANSWER FOR MCQ

1-A  2-B  3-B  4-E  5-E  6-B  7-E  8-B  9-A  10-E  11-D

1 In converting a less-than-or-equal constraint for use in a simplex table, we must add
A) a surplus variable.
B) a slack variable.
C) an artificial variable.
D) both a surplus and a slack variable.
E) none of the above.

2 In converting a greater-than-or-equal constraint for use in a simplex table, we must add
A) an artificial variable.
B) a slack variable.
C) a slack and an artificial variable.
D) a surplus and an artificial variable.
E) a slack and a surplus variable.

3 In converting an equal constraint for use in a simplex table, we must add
A) a surplus variable.
B) a slack variable.
C) a surplus and a slack variable.
D) an artificial variable.
E) a surplus and an artificial variable.
4 The Cj - Zj row in a Simplex table for maximization represents

A) profit per unit.
B) constraints.
C) gross profit.
D) net profit.
E) none of the above.

5 The Cj row in a simplex table for maximization represents

A) profit per unit.
B) constraints.
C) gross profit.
D) net profit.
E) none of the above.

6 The Zj row in a simplex table for maximization represents

A) gross profit.
B) net profit.
C) profit per unit.
D) constraints.
E) none of the above.

7 For a maximization problem using a Simplex table, we know we have reached the optimal solution when the Cj - Zj row

A) has no numbers in it.
B) has no positive numbers in it.
C) has no negative numbers in it.
D) has no nonzero numbers in it.
E) none of the above

8 For a minimization problem using a Simplex table, we know we have reached the optimal solution when the Cj - Zj row
A) has no numbers in it.
B) has no positive numbers in it.
C) has no negative numbers in it.
D) has no nonzero numbers in it.
E) none of the above

9 In a Simplex table, the pivot row is computed by
A) dividing every number in the pivot row by the corresponding number in the profit row.
B) dividing every number in the profit row by the pivot number.
C) dividing every number in the pivot row by the pivot number.
D) dividing every number in the net profit row by the corresponding number in the gross profit row.
E) none of the above.

10 If, when we are using a Simplex table to solve a maximization problem, we find that the ratios for determining the pivot row are all negative, then we know that the solution is
A) unbounded.
B) infeasible
C) degenerate.
D) optimal.
E) none of the above.

11 A feasible solution requires that all artificial variables is
A) greater than zero.
B) less than zero.
C) equal to zero.
D) there are no special requirements on artificial variables; they may take on any value.
E) none of the above

ANSWER FOR MCQ
1-b  2-d  3-d  4-d  5-a  6-a  7-b  8-c  9-b  10-a  11-c

1 Transportation problems are concerned with distributing commodities from sources to destinations in such a way as to maximize the total amount shipped.
A) True
B) False

2 Transportation problems always have integer solutions if the supplies and demands are all integer.
A) True
B) False

3 The Hungarian Method is an algorithm used to solve assignment problems.
A) True
4 When demand and supply are not equal in a transportation problem then the problem can be reformulated and solved.
A) True
B) False

5 It is possible to adjust the transportation simplex method to maximize profit instead of minimize cost.
A) True
B) False

6 Which of the following is needed to use the transportation model?
A) Capacity of the sources.
B) Demand of the destinations.
C) Unit shipping costs.
D) All of the above.
E) None of the above.

7 Which of the following is not an assumption or requirement of a transportation problem?
I Goods are the same, regardless of source.
II There must be a single source.
III Minimum quantities must be shipped.
IV Shipping costs per unit do not vary with the quantity shipped.
A) I and IV
B) II and III
C) I, II and IV
D) I and III
E) I, II, III, and IV

8 Which of the following can be modeled as variants of the standard transportation problem?
A) The sum of the supplies exceeds the sum of demands.
B) A destination has a minimum and maximum demand.
C) Certain source-destination combinations cannot be used for distributing units.
D) a. and b. only.
E) All can be modeled as a variation of the transportation problem.

9 An assignment problem:
A) will always have an integer solution.
B) has all supplies and demands equal to 0.
C) always has the demand greater than the supply.
D) All of the above.
E) None of the above.

10 Which of the following is an assumption of assignment problems?
A) The number of assignees and the number of tasks are the same
B) The objective is to minimize the number of assignments not made.
C) Each task is to be performed by exactly one assignee.
D) a. and c. only.
E) None of the above.
ANSWER FOR MCQ

1-b 2-a 3-a 4-a 5-a 6-d 7-b 8-e 9-a 10-d

1 In a PERT network, the earliest (activity) start time is the
A) earliest time that an activity can be finished without delaying the entire project.
B) latest time that an activity can be started without delaying the entire project.
C) earliest time that an activity can start without violation of precedence requirements.
D) latest time that an activity can be finished without delaying the entire project.
E) none of the above

2 Which of the following, if any, may not be one of the questions answered by PERT or PERT/Cost?
A) When will the entire project be completed?
B) Are there enough resources available to complete the project on time?
C) What is the probability that the project will be completed by a specific date?
D) What are the critical activities in the project?
E) none of the above

3 PERT
A) assumes we do not know ahead of time what activities must be completed.
B) allows computation of the program’s evaluation.
C) is a network technique that uses three time estimates for each activity in a project.
D) is a deterministic network technique that allows for project crashing.
4 Time an activity would take assuming very unfavorable conditions is represented by the
A) optimistic time (a).
B) most likely time (m).
C) deterministic time (d).
D) pessimistic time (b).
E) none of the above

5 The expected time in PERT is
A) a weighted average of the most optimistic time, most pessimistic time, and four times the most likely time.
B) the modal time of a beta distribution.
C) a simple average of the most optimistic, most likely, and most pessimistic times.
D) the square root of the sum of the variances of the activities on the critical path.
E) none of the above

6 Given the following activity’s optimistic, most likely, and pessimistic time estimates of 6, 10, 14 days, respectively, compute the PERT time for this activity.
A) 5
B) 10
C) 7
D) 12
E) none of the above

7 Which of the following is one of the assumptions of PERT?
A) Total project completion time follows a normal probability distribution.
B) Activity times are dependent and correlated.
C) Project completion time follows a skewed chi-square distribution.
D) Activity times are known with certainty.
E) All of the above are assumptions of PERT.

8 The first step in planning and scheduling a project is to
A) assign time and cost estimates to each activity.
B) develop the work breakdown structure.
C) compute the longest time through the network.
D) use PERT or CPM to help.
E) none of the above.

**ANSWER FOR MCQ**

1-C 2-E 3-C 4-D 5-A 6-B 7-A 8-B

1 Game theory helps to understand the behaviour of firms:
A) that are strategically independent.
B) that are strategically interdependent.
C) that do not face any competition.
D) that are not profit maximizers.

2 A strategy that yields a higher payoff no matter what the other players in the game choose is known as a:
A) prisoner's strategy.
B) dominated strategy.
C) dominant strategy.
D) Nash strategy.

3 A prisoner's dilemma occurs when:
A) each player has a dominant strategy, and the payoff to each player is larger than what it would be if each had chosen a dominated strategy.
B) each player has a dominant strategy, and the payoff to each player is smaller than what it would be if each had chosen a dominated strategy.
C) no player has a dominant strategy and the payoff is as large as possible.
D) each player would like to choose a moral strategy, but is coerced into choosing to do something illegal.

4 A way of changing incentives so as to make promises credible is known as:
A) a commitment problem.
B) a dominant strategy.
C) a commitment device.
D) a practical promise.

5 A common assumption about the players in a game is that
A) neither player knows the payoff matrix.
B) the players have different information about the payoff matrix.
C) only one of the players pursues a rational strategy.
D) the specific identity of the players is irrelevant to the play of the game.
6 In a zero-sum game,
A) what one player wins, the other loses.
B) the sum of each player’s winnings if the game is played many times must be zero.
C) the game is fair—each person has an equal chance of winning.
D) long-run profits must be zero.

7 The Prisoners’ Dilemma is not a constant sum game because
A) some outcomes are better than others for both players.
B) the prisoners’ sentences are necessarily non-zero.
C) the game does not have a Nash equilibrium.
D) the sum of the prisoners’ sentences is non-zero.

8 The twin non-confess strategy choice in the Prisoners’ Dilemma can be described as
A) non-Pareto optimal and unstable.
B) Pareto optimal and unstable.
C) non-Pareto optimal and stable.
D) Pareto optimal and stable.

9 The Nash equilibrium in a Bertrand price setting game in which firms first choose output capacities resembles the equilibrium in
A) the competitive model.
B) the Cournot model.
C) the cartel model.
D) the price leadership model.

10 A price leader in the Stackelberg model is assumed to know
A) the market demand curve.
B) its own cost function.
C) its rival’s reaction function.
D) all of the above.

ANSWER FOR MCQ
1-B  2-C  3-B  4-C  5-D  6-A  7-A  8-B  9-B  10-D