

These are sample MCQs to indicate pattern, may or may not appear in examination

University of Mumbai

Online Examination 2020

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Final Year Semester VII

Course Code: MEE7019 and Course Name: Operations research

Time: 1hour

Max. Marks: 50

Note to the students:- All the Questions carry equal marks .

Q	Linear programming deals with the optimization of function of variables known as				
A	Objective function				
B	Constraints				
C	Variables				
D	Solution				
Q	Items such as raw materials, components, subassemblies used to produce the final product is				
A	Production inventory				
B	Work-in-process inventory				
C	Finished goods inventory				
D	MRO inventory				
Q	In transportation problem when number of shipments in a feasible solution is less than the number of rows plus number of columns minus one				
A	the solution is optimal				
B	there is degeneracy				
C	a dummy source must be created				
D	a dummy destination must be created				
Q	Fixed cost associated with placing of an order or setting up a machinery before starting the production is called as				
A	Procurement costs or set-up cost				

B	Stock holding cost				
C	Cost of storage space				
D	Handling cost				
Q	Which of the following is not a characteristic of standard form of linear programming problem				
A	All variables are non-negative				
B	The right-hand side of each constraint is negative				
C	All constraints are expressed as equations				
D	All constraints are expressed as equations				
Q	In dynamic programming, the problem is broken down into subproblems and each subproblem is called as				
A	Point				
B	Stage				
C	State variable				
D	State				
Q	Inventories maintained to meet the anticipated demand are				
A	Lot size inventories				
B	Anticipation inventories				
C	Finished goods inventories				
D	Buffer inventories				
Q	The total cost of the optimal solution to a transportation problem				
A	is calculated by multiplying the total supply by the average cost of cells				
B	can not be calculated from the information given				
C	can be calculated from the original non optimal cost, by adding the savings made at each improvement				
D	can be calculated based only on the entries in the filled cells of the solution				

Q	A set of variables which satisfies the constraints in linear programming problem is called				
A	Problem				
B	Condition				
C	Solution				
D	Standard				
Q	Which of the following operations research technique helps in minimizing total waiting in queue and service costs				
A	Queuing Theory				
B	Simulation technique				
C	Replacement theory				
D	Assignment theory				
Q	Which of the following is not the assumption in sequencing problem?				
A	only one operation is carried out on a machine at a particular time				
B	each operation, once started, must be completed				
C	many operations can be carried out on one machine at the same time				
D	a job is processed as soon as possible, but only in the order specified				
Q	In queuing model, the proportion of time a server actually spends with the customers is called as				
A	System factor				
B	Contact factor				
C	Utilization factor				
D	General factor				
Q	In theory of games, the strategy that puts the player in the most preferred position irrespective of the strategy of his opponents is called as				
A	Unknown strategy				

B	Mixed strategy				
C	Optimal strategy				
D	Perfect strategy				
Q	In linear programming problem, Big-M method is also called as				
A	two phase method				
B	simple method				
C	Method of penalties				
D	Duality				
Q	The predetermined rule by which a player decides his course of action from his list of courses of actions during the game in theory of games is called as				
A	Action				
B	Strategy				
C	Play				
D	Payoff				
Q	The stepping stone method is an alternative to using the northwest corner rule				
A	is an alternative to using the row minima method				
B	is an alternative to using the modified distribution method (MODI)				
C	is an alternative to using the column minima method				
D	In theory of games, if maximin value = minimax value = 0, then the game is called as				
Q	Balanced game				
A	Fair game				
B	Unfair game				
C	game without saddle point				
D	In the Big-M method of if at least one artificial variable appears in the basis at a non-zero level and the optimality condition is satisfied, then the original problem has				
Q					

A	unique solution				
B	no feasible solution				
C	Unbounded solution				
D	optimal solution				
	Optimization of number of situations where the decision variables vary with time and these situations are considered to be dynamic in nature can be done by				
Q	Dynamic Programming model				
A	Simulation technique				
B	Replacement theory				
C	Sequencing model				
D	The allocated cells in the transportation table are called				
Q	Occupied cells				
A	Empty cells				
B	Unoccupied cells				
C	Unloaded cells				
D	In two phase method of LPP, iterations in phase I are stopped as soon as				
Q	Objective function becomes 1				
A	Objective function becomes infinite				
B	Objective function becomes zero				
C	artificial variable becomes zero				
D	Monte Carlo Simulation technique employs				
Q	Rational numbers				
A	Random numbers				
B	Real numbers				
C	Natural numbers				
D	In queuing theory, the average time for which a customer has to wait in the queue to get service is called as				
Q	Queue time				
A	Service time				
B	Waiting time in the queue				
C	Idle time				
D					

Q	A particular item has a demand of 9000 units per year. The cost of one procurement is Rs. 100 and the holding cost per unit is Rs. 2.40 per year. The replacement is instantaneous and no shortages are allowed. Determine the economic lot size.				
A	866 units/procurement				
B	966 units/procurement				
C	868 units/procurement				
D	968 units/procurement				
Q	Theory of games is based on minimax principle, which mean				
A	minimize the player's maximum gain				
B	minimize the player's maximum loss				
C	maximize the player's loss				
D	minimize the player's gain				