CHAPTER 12

LPP

TRUE / FALSE QUESTIONS

Q	Questions
1	If the feasible region for a LPP is unbounded maximum or minimum of the
1	objective function $7 = ax + by$ may or may not exist
2	Maximum value of the objective function $7 = ax + by$ in a LPP always occurs at
	only one corner point of the feasible region.
3	In a LPP, the minimum value of the objective function $Z = ax + by$ is always 0
	if origin is one of the corner point of the feasible region.
4	In a LPP, the maximum value of the objective function Z = <i>ax</i> + <i>by</i> is always finite.
5	Linear programs typically have interior solutions.
6	If the feasible region for a linear programming problem is bounded, then
	the objective function Z = <i>ax</i> + <i>by</i> has both a maximum and a minimum value on R.
7	The minimum value of the objective function $Z = ax + by$ in a linear
	programming problem always occurs at only one corner point of the feasible region.
8	In a LPP, the linear function which has to be maximised or minimised is
	called a linear Objective function.
9	If the feasible region is void, then the problem has bounded solution.
10	The common region determined by all the linear constraints of a LPP is
	called the Feasible region.
11	The feasible region for an LPP is always a Convex polygon.
12	If the variable x is such that its value lies between two fixed point a and b, then (x: a <x <b)is="" called="" closed="" interval.<="" td=""></x>
13	The set of values of the variable satisfying all constraints is called feasible solution of the problem.
14	Graph of two or more than two equations is called linear inequation system.
15	The set of solution points that satisfies all of a linear programming problem's constraints
	simultaneously is defined as the feasible region in graphical linear programming.
16	An objective function is necessary in a maximization problem but is not required in a minimization
17	The graphical approach to the solution of linear programming problems is a very efficient means of
18	The objective function is a linear relationship reflecting the objective of an operation.

19	Slack variables are used to convert inequality constraints into equality constraints
20	Some LP problems have exactly two solutions.
21	The graph of a linear inequality consists of a line and only some of the points on one side of the line.
22	An optimization problem may involve finding maximum profit only
23	The conditions $x \ge 0$, $y \ge 0$ are called non negative restrictions.
24	A Linear function also called objective function.
25	The linear inequalities or equations or restrictions on a variable of a linear programming problem are called constraints.
26	Any point in the feasible region that gives the optimal value (maximum or minimum) of the objective function is called an optimal region.
27	The set of all feasible solutions of a LPP is a concave set
28	Maximum value of the objective function Z = ax+by in a LPP always occurs at only one corner point of the feasible region
29	Z = 3x + 4y, Subject to the constraints x+y 1, x,y 0. the shaded region shown in the figure as OAB is bounded and the coordinates of corner points O, A and B are (0,0), (1,0) and (0,1), respectively. The maximum value of Z is 2
30	A set of linear inequalities also called linear constraints.
31	If two corner points of the feasible region are both optimal solution of same type, then any point on
	the line segments joining these two points is an optimal solution of the same type.
32	The feasible region for an LPP is always a polygon.
33	A corner point of a feasible region is a point in the region which is the intersection of two boundary lines.
34	A feasible region of a system of linear inequalities is said to be bounded if it can be enclosed within a circle.
35	In a LPP, the objective function is never linear

36	In a LPP, the linear inequalities or restrictions on the variables are called constraints.
37	Variable x and y in the linear function Z = ax + by are called constraint variables and can be any real number.
38	The optimal value of the objective function is attained at a corner point of the feasible region.
39	A corner point of a feasible region is a point in the region which is the intersection of two boundary lines.
40	Z = 8x + 10y, subject to 2x + y ≥ 1, 2x + 3y ≥ 15, y ≥ 2, x ≥ 0, y ≥ 0. The minimum value of Z occurs at (1.5, 4).
41	Objective function of a L.P.P.is a relation between the variables .
42	Region represented by $x \ge 0$, $y \ge 0$ is first quadrant .
43	The region represented by the set { (x, y) : $4 \le x^2 + y^2 \le 9$ } is a convex set .
44	The solution set of inequalities $x - 2y \ge 0, 2x - y + 2 \le 0, x \ge 0, y \ge 0$ is empty.
L	

TRUE / FALSE QUESTION ANSWERS

Q No	Answer
1	True
2	False
3	False
4	True
5	False
6	True
7	False
8	True
9	False
10	True
11	TRUE
12	FALSE
13	TRUE
14	FALSE
15	True
16	False

17	True
18	True
19	True
20	False
21	False
22	False
23	True
24	True
25	True
26	False
27	False
28	False
29	False
30	True
31	True
32	False
33	True
34	True
35	False
36	True
37	False
38	True
39	True
40	True
41	False
42	True
43	False
44	True

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