ECAT (Pre-Eng) Mathematics Chapter 21 Linear Inequalities & Linear Programming

Sr	Questions	Answers Choice
1	(0,1) is in the solution of the inequality	A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 5 D. x -2y < -5
2	The corner point of the boundary lines, x-2y 2x + y = 2 is:	A. (2,6) B. (6,2) C. (-2,2) D. (2,-2)
3	Maximum value of z =15x +20y subject to 3x+ 4y≤ 12,x,y≥ 0 is given by	A. 46 B. 60 C. 50 D. 70
4	A _____ divides the plane into left and right half planes.	A. Vertical line B. Horizontal line C. Non vertical line D. Inequality
5	An expression involving any of the symbols <,>,≤ or ≥ is called	A. equation B. inequality C. linear equation D. identity
6	Optimal solution is found by evaluation the objective function at	A. All point of feasible region B. Corner point C. Origin D. None
7	s > t then	A. (s - t)²> (t - s) ² B. (s - t)²< (t - s) ² C. (s - t)²= (t - s) ² D. None
8	If x < y, 2x = A, and 2y = B, then	A. A = B B. A < B C. A < x D. B < y
9	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None
10	3x + 4 > 0 is	A. equation B. identity C. inequality D. none of these
11	Optimize means _____ a quantity under certain constraints	A. Minimize B. Maximize C. Maximize or minimize D. None of these
12	A point of a solution region where two of its boundary lines intersect, is called	A. Boundary B. Inequality C. Half plane D. Vertex
13	ab > 0 and a > 0 then	A. a > b B. a < b C. a = b D. None
14	The maximum value of Z = 3x+ 4y subjected to the constrains x+ y≤ 40,x+ 2y≤ 60, x≥ 0 and y≥ 0 is	A. 120 B. 100 C. 140 D. 160
		A. r + 2 > 4

15	r + 3 >5 then which is true	B. r + 2 < 4 C. r + 2 = 4 D. None
16	A farmer possesses 100 hectometers of land and wants to grow corn and wheat. Cultivations of corn requires 3 hours per hectometer while cultivation of wheat requires 2 hours per hectometer. Working hours cannot exceed 240. If he gets a profit of Rs. 20 per hectometer for corn and Rs. 15 per hectometer for wheat. The profit function for the farmer is	A. P(x, y) = 20x + 15y B. P(x, y) = 2x + 3y C. P(x, y) = x + y D. P(x, y) = 3x + 2y
17	x = _____ is in the solution of 2x - 3 < 0	A. 2 B. -2 C. 3 D. 4
18	Multiplying each side of an inequality by (-1) will:	A. Not effect B. Change the sign C. Become zero D. Not defined
19	(1, 1) is the in the solution of the inequality	A. 3x + 4y > 3 B. 2x + 3y < 2 C. 4x = 3y > 5 D. 2c - 3y > 2
20	If -1 < x < 0, which of the following statements must be true?	A. x < x²< x³ B. x < x³< x² C. x²< x³< x D. x²< x < x³