

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

Sr	Questions	Answers Choice
1	(1, 2) is in the solution of the inequality	A. $2x + y > 8$ B. $2x + y < 6$ C. $2x - y > 1$ D. $2x + 3y < 2$
2	$x = \underline{\hspace{2cm}}$ is in the solution of $2x - 5 > 0$	A. 0 B. 2 C. -2 D. 3
3	For graphing a linear inequality, solid line is drawn if the inequality involves the symbols:	A. $>$; or $<$; B. $<=$; or $>=$ C. $=$ or \neq D. $=$ or $>$
4	$3x + 4 < 0$ is	A. inequality B. equation C. identity D. not inequality
5	$x = \underline{\hspace{2cm}}$ is in the solution of $2x + 3 \geq 0$	A. 1 B. -2 C. -3 D. -4
6	$3x + 4 \leq 0$ is	A. not inequality B. equation C. identity D. inequality
7	The graph of the linear equation of the form $ax + by = c$ is a line which divided the plane into:	A. Two similar regions B. Two disjoint regions C. Four equal parts D. One region
8	A $\underline{\hspace{2cm}}$ divides the plane into left and right half planes.	A. Vertical line B. Horizontal line C. Non vertical line D. Inequality
9	The points (x, y) which satisfy a linear inequality in two variables x and y form its	A. domain B. range C. solution D. none of these
10	The real numbers which satisfy an inequality form its	A. solution B. coefficient C. domain D. range
11	Inequalities have $\underline{\hspace{2cm}}$ symbol	A. 2 B. 3 C. 4 D. 1
12	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)
13	A point (x,y) which satisfy a linear inequality in two variables form its	A. Solution B. Domain C. Range D. None
14	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. $P(x, y) = 3x + 2y$
15	The corner point of the boundary lines, $x - 2x + 2y = 10$ is:	A. (8,1) B. (1,8) C. (6,10) D. (3,5)

16	The point (1,3) is one solution of	A. $3x + 5y \geq 29$ B. $3x + 5y \leq 7$ C. $x + 2y \leq 4$ D. $x + 4y \geq 3$
17	The maximum value of $Z = 3x + 4y$ subjected to the constraints $x + y \leq 40$, $x + 2y \leq 60$, $x \geq 0$ and $y \geq 0$ is	A. 120 B. 100 C. 140 D. 160
18	The solution set of the inequality $ax + by < c$ is	A. straight line B. half plane C. parabola D. none of these
19	$2x + 3y > 4$ is a linear inequality in	A. one variable B. two variables C. three variables D. none of these
20	The point _____ is in the solution of the inequality $2x + 3y < 5$	A. (1,1) B. (2,2) C. (0,1) D. (0,2)