

ECAT Pre General Science Mathematics Chapter 21 Linear Inequalities and Linear Programming Online Test

Sr	Questions	Answers Choice
1	The solution set of the inequality ax + by < c is	A. straight line B. half plane C. parabola D. none of these
2	A point of a solution region where two of its boundary lines intersect, is called	A. Boundary B. Inequality C. Half plane D. Vertex
3	Optimal solution is found by evaluation the objective function at	A. All point of feasible regionB. Corner pointC. OriginD. None
4	The graph of y < 2 is the	A. Left half planeB. upper half planeC. Right half planeD. Lower half plane
5	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None
6	The corner point of the boundary lines, x- 2x x+2y=10 is:	A. (8,1) B. (1,8) C. (6,10) D. (3,5)
7	The real numbers which satisfy an inequality form its	A. solution B. coefficient C. domain D. range
8	The solution set of x < 4 is	A <i>>∞</i> < x < 4 B <i>>∞</i> > x > 4 C <i>>∞</i> < x < 2 D <i>>∞</i>
9	(1, 2) is in the solution of the inequality	A. 2x + y > 8 B. 2x + y <u><</u> 6 C. 2x - y > 1 D. 2x + 3y < 2
10	(0,0) is in the solution of the inequality	A. x + y > 3 B. x - y > 2 C. 3x + 2y > 5 D. 3x - 2y < 2
11	Corner point of the system x - y ≤ 2 ,x + y ≤ 4 ,2x -y ≤ 6 ,x ≥ 0 ,y ≥ 0	A. (1,4) B. (4,2) C. (3,1)

		D. (4,1)
12	A point (x,y) which satisfy a linear inequality in two variables form its	A. Solution B. Domain C. Range D. None
13	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
14	x = is in the solution of $2x - 3 < 0$	A. 2 B2 C. 3 D. 4
15	The graph of linear equation 2x + 3y = 10	A. Parabola B. Circle C. Hyperbola D. Straight line
16	Optimize means a quantity under certain constraints	A. Minimize B. Maximize C. Maximize or minimize D. None of these
17	An expression involving any of the symbols <,>,≤ or ≥ is called	A. equation B. inequality C. linear equation D. identity
18	Each point of the feasible region is called	A. Solution B. feasible solution C. Both a & D. None
19	Order (or sense) of an inequality is changed by multiplying or dividing its each side by a:	A. Zero B. one C. negative constant D. Non negative constant
20	(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
21	The total cost of 2 apples and 3 oranges is \$1.70, which of the following is true	
21	The total cost of 2 apples and 3 oranges is \$1.70, which of the following is true (1,0) is in the solution of the inequality	D. x-2y < -5 A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not
		D. x-2y < -5 A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 3
22	(1,0) is in the solution of the inequality	D. x-2y < -5 A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 3 D. x - 2y < -5 A. Vertical line B. Horizontal line C. Non vertical line
22	(1,0) is in the solution of the inequality A divides the plane into left and right half planes.	D. x-2y < -5 A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 3 D. x - 2y < -5 A. Vertical line B. Horizontal line C. Non vertical line D. Inequality A. 0 B. 2 C1 D2 A. inequality B. equation C. identity
22 23 24	(1,0) is in the solution of the inequality A divides the plane into left and right half planes. x = is in the solution of 2x + 3 < 0	D. x-2y < -5 A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 3 D. x - 2y < -5 A. Vertical line B. Horizontal line C. Non vertical line D. Inequality A. 0 B. 2 C1 D2 A. inequality B. equation
22 23 24 25	(1,0) is in the solution of the inequality A divides the plane into left and right half planes. x = is in the solution of 2x + 3 < 0 3x + 4 < 0 is	D. x-2y < -5 A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined A. 3x + 2y > 8 B. 2x - 3y < 4 C. 2x + 3y > 3 D. x - 2y < -5 A. Vertical line B. Horizontal line C. Non vertical line D. Inequality A. 0 B. 2 C1 D2 A. inequality B. equation C. identity D. not inequality A. r + 2 > 4 B. r + 2 < 4 C. r + 2 = 4

		D. Not defined
29	Question Image	A. p < r B. p > rr C. p + r < 0 D. p - r < 0
30	x = 1 is in the solution of the inequality	A. x + 1 > 0 B. x - 2 > 0 C. 3x - 1 < 0 D. x + 2 < 0
31	Which of the following is not a solution of system of inequalities $2x$ - $3y \le 6,2x + y \ge 2,x + 2y \le 8,$ $x \ge 0, y \ge 0$	A. (1,0) B. (0,4) C. (3,0) D. (8,0)
32	x = -1 is in the solution of the inequality	A. x + 5 < 0 B. 2x + 3 <u><</u> 0 C. x > 0 D. 2x + 3 > 0
33	(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
34	Inequalities have symbol	A. 2 B. 3 C. 4 D. 1
35	The point is in the solution of the inequality 4x - 3y < 2	A. (0,1) B. (2,1) C. (2,2) D. (3,3)
36	If $-1 < x < 0$, which of the following statements must be true?	A. x < x ² < x ³ B. x < x ³ < x ² C. x ² < x ³ < x ³ < x ³ < x ³ < x x ³ < x D. x ² < x < x ³
37	A function which is to be maximized or minimized is called an	A. Explicit function B. Implicit function C. Objective function D. None
38	3x + 4 = 0 is	A. not inequality B. equation C. identity D. inequality
39	If ab > 0 and a < 0, which of the following is negative?	A. b Bb Ca D. (a - b) ²
40	x is a member of the set [-1, 0, 3, 5] y is a member of the set {-2, 1, 2, 4} which is possible?	A. x - y = -6 B. x - y < -6 C. x - y > -6 D. None
41	2x + 3y > 4 is a linear inequality in	A. one variable B. two variables C. three variables D. none of these
42	The liner equation ax + by = c is called of the inequality ax +by > c.	A. Associated equation B. Non-associated equation C. disjoint equation D. Feasible equation
43	x = is in the solution of $2x - 5 > 0$	A. 0 B. 2 C2 D. 3
44	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. $P(x, y) = 3x + 2y$
45	A point of a solution regions where two of its boundary lines intersect, is called:	A. Vertex of the solution B. Feasible point C. Point of inequality

D. Not defined

		C. Form of inequality D. Null point of the solution region
46	A point where two of its boundary lines intersect is called	A. Corner point B. Feasible point C. Vertex D. Feasible solution
47	$x = $ is in the solution of $2x + 3 \ge 0$	A. 1 B2 C3 D4
48	$3x + 4 \ge 0$ is	A. equation B. inequality C. identity D. none of these
49	(2, 1) is in the solution of the inequality	A. 2x + y <u>></u> 7 B. x - y > 2 C. 3x + 5y < 6 D. 2x + y < 6
50	The set of ordered pairs (x,y) such that $ax+by < c$, and (x,y) such that $ax+by>0$, are called	A. Half planes B. Boundary C. Linear Inequalities D. Feasible regions
51	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
52	$3x + 4 \le 0 \text{ is}$	A. not inequality B. equation C. identity D. inequality
53	The maximum value of Z = $3x+4y$ subjected to the constrains $x+y \le 40, x+2y \le 60, x \ge 0$ and $y \ge 0$ is	A. 120 B. 100 C. 140 D. 160
54	If 4 - x >5, then	A. x > 1 B. x > -1 C. x < 1 D. x < -1
55	The feasible region which can be enclosed within a circle is called	A. Bounded region B. Convex region C. Unbounded region D. None
56	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
57	Which of the following ordered pair is a solution of the inequality x+2y<6?	A. (2,3) B. (2,2) C. (6,0) D. (1,1)
58	The points (x, y) which satisfy a linear inequality in two variables x and y from its	A. domain B. range C. solution D. none of these
59	The point is in the solution of the inequality 2x + 3y < 5	A. (1,1) B. (2,2) C. (0,1) D. (0,2)
60	Which is in the solution set of $4x - 3y < 2$	A. (3, 0) B. (4, 1) C. (1, 3) D. None
61	If $x < y$, $2x = A$, and $2y = B$, then	A. A = B B. A &It B C. A &It x D. B &It y
62	The point (1,3) is one solution of	A. 3x + 5y > 29 B. 3x + 5y < 7 C. x + 2y < 4 D. x + 4y > 3
		A. a > b

63	ab > 0 and a > 0 then	D. a out, D C. a = b D. None
64	ax + by < c is linear inequality in	A. four variables B. three variables C. two variables D. one variable
65	3x + 4 > 0 is	A. equation B. identity C. inequality D. none of these
66	Sum of two quantities is at least 20 is denoted by	A. x +y =20 B. x +y≥ 20 C. x +y≠ 20 D. x +y≤20
67	There may be feasible solution in the feasible region	A. Infinite B. Finite C. Defined D. None of above
68	The point is in the solution of the inequality 2x - 3y > 5	A. (1, -1) B. (2,2) C. (0,0) D. (3,0)
69	x = 0 is in the solution of the inequality	A. x > 0 B. 3x + 4 < 0 C. x + 3 < 0 D. x - 2 < 0
70	The point is in the solution of the inequality 2x - 3y < 4	A. (0, -2) B. (1, -3) C. (2, 2) D. (3, 0)
71	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)
72	The graph of y> 0 is the upper - half of:	A. y-axis B. x-axis C. 1st and 4th quandrant D. 2nd and 3rd quadrant
73	For which of the following ordered pairs (s, t) is $s + t > 2$ and $s - t < -3$?	A. (3, 2) B. (2, 3) C. (1, 8) D. (0, 3)