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

| Sr | Questions | Answers Choice |
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| 1 | Which of the following ordered pair is a solution of the inequality x+2y<6? | A. (2,3)<br>B. (2,2)<br>C. (6,0)<br>D. (1,1) |
| 2 | x = _____ is in the solution of 2x + 3 ≥ 0 | A. 1<br>B. -2<br>C. -3<br>D. -4 |
| 3 | 3x + 4 ≤ 0 is | A. not inequality<br>B. equation<br>C. identity<br>D. inequality |
| 4 | x = 0 is in the solution of the inequality | A. x > 0<br>B. 3x + 4 < 0<br>C. x + 3 < 0<br>D. x - 2 < 0 |
| 5 | A point where two of its boundary lines intersect is called | A. Corner point<br>B. Feasible point<br>C. Vertex<br>D. Feasible solution |
| 6 | A point of a solution region where two of its boundary lines intersect, is called | A. Boundary<br>B. Inequality<br>C. Half plane<br>D. Vertex |
| 7 | The total cost of 2 apples and 3 oranges is $1.70, which of the following is true | A. The cost of one apple<br>B. The cost of one orange<br>C. Both have equal cost per item<br>D. Cost of each single item can not be determined |
| 8 | Maximum value of z =15x +20y subject to 3x+ 4y≤ 12,x,y≥ 0 is given by | A. 46<br>B. 60<br>C. 50<br>D. 70 |
| 9 | Inequalities have _____ symbol | A. 2<br>B. 3<br>C. 4<br>D. 1 |
| 10 | 3x + 4 > 0 is | A. equation<br>B. identity<br>C. inequality<br>D. none of these |
| 11 | An expression involving any of the symbols <,>,≤ or ≥ is called | A. equation<br>B. inequality<br>C. linear equation<br>D. identity |
| 12 | The feasible region which can be enclosed within a circle is called | A. Bounded region<br>B. Convex region<br>C. Unbounded region<br>D. None |
| 13 | 3x + 4 ≥ 0 is | A. equation<br>B. inequality<br>C. identity<br>D. none of these |
| 14 | ax + by < c is linear inequality in | A. four variables<br>B. three variables<br>C. two variables<br>D. one variable |
| 15 | 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<br>B. Boundary<br>C. Linear Inequalities |

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| | | D. Feasible regions |
| 16 | The point _____ is in the solution of the inequality 2x + 3y < 5 | A. (1,1)<br>B. (2,2)<br>C. (0,1)<br>D. (0,2) |
| 17 | Each point of the feasible region is called | A. Solution<br>B. feasible solution<br>C. Both a & b<br>D. None |
| 18 | Multiplying each side of an inequality by (-1) will: | A. Not effect<br>B. Change the sign<br>C. Become zero<br>D. Not defined |
| 19 | x = -1 is in the solution of the inequality | A. x + 5 < 0<br>B. 2x + 3 <u><</u> 0<br>C. x > 0<br>D. 2x + 3 > 0 |
| 20 | x = 1 is in the solution of the inequality | A. x + 1 > 0<br>B. x - 2 > 0<br>C. 3x - 1 < 0<br>D. x + 2 < 0 |