# ECAT (Pre-Eng) Mathematics MCQ's Test For Chapter 21 Linear Inequalities & Linear Programming

| Sr | Questions | Answers Choice |
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| 1 | A point of a solution regions where two of its boundary lines intersect, is called: | A. Vertex of the solution<br>B. Feasible point<br>C. Point of inequality<br>D. Null point of the solution region |
| 2 | 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 |
| 3 | 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) |
| 4 | The point _____ is in the solution of the inequality 4x - 3y < 2 | A. (0,1)<br>B. (2,1)<br>C. (2,2)<br>D. (3,3) |
| 5 | ax + by < c is linear inequality in | A. four variables<br>B. three variables<br>C. two variables<br>D. one variable |
| 6 | 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<br>B. P(x, y) = 2x + 3y<br>C. P(x, y) = x + y<br>D. P(x, y) = 3x + 2y |
| 7 | For which of the following ordered pairs (s, t) is s + t > 2 and s - t < -3? | A. (3, 2)<br>B. (2, 3)<br>C. (1, 8)<br>D. (0, 3) |
| 8 | (1,0) is in the solution of the inequality | A. 3x + 2y > 8<br>B. 2x - 3y < 4<br>C. 2x + 3y > 3<br>D. x - 2y < -5 |
| 9 | A function which is to be maximized or minimized is called an | A. Explicit function<br>B. Implicit function<br>C. Objective function<br>D. None |
| 10 | 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<br>B. 100<br>C. 140<br>D. 160 |
| 11 | (1, 2) is in the solution of the inequality | A. 2x + y > 8<br>B. 2x + y <u><</u> 6<br>C. 2x - y > 1<br>D. 2x + 3y < 2 |
| 12 | The point _____ is in the solution of the inequality 2x - 3y > 5 | A. (1, -1)<br>B. (2,2)<br>C. (0,0)<br>D. (3,0) |
| 13 | 3x + 4 < 0 is | A. inequality<br>B. equation<br>C. identity<br>D. not inequality |
| 14 | An expression involving any of the symbols <,>,≤ or ≥ is called | A. equation<br>B. inequality<br>C. linear equation<br>D. identity |
| 15 | Multiplying each side of an inequality by (-1) will: | A. Not effect<br>B. Change the sign |

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| | | C. Become zero<br>D. Not defined |
| 16 | The corner point of the boundary lines, x-2y<br>2x + y = 2 is: | A. (2,6)<br>B. (6,2)<br>C. (-2,2)<br>D. (2,-2) |
| 17 | The solution set of the inequality ax + by < c is | A. straight line<br>B. half plane<br>C. parabola<br>D. none of these |
| 18 | 3x + 4 ≥ 0 is | A. equation<br>B. inequality<br>C. identity<br>D. none of these |
| 19 | Sum of two quantities is at least 20 is denoted by | A. x +y =20<br>B. x +y≥ 20<br>C. x +y≠ 20<br>D. x +y≤20 |
| 20 | The graph of y> 0 is the upper - half of: | A. y-axis<br>B. x-axis<br>C. 1st and 4th quandrant<br>D. 2nd and 3rd quadrant |