ECAT Computer Science Entry Test

Sr	Questions	Answers Choice
1	r + 3 >5 then which is true	A. r + 2 > 4 B. r + 2 < 4 C. r + 2 = 4 D. None
2	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
3	The total cost of 2 apples and 3 oranges is $1.70, which of the following is true	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
4	Question Image	A. p < r B. p > rr C. p + r < 0 D. p - r < 0
5	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. $x^2 < x^3 < x$ D. $x^2 < x < x^3$
6	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)
7	Which is in the solution set of 4x - 3y < 2	A. (3, 0) B. (4, 1) C. (1, 3) D. None
8	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
9	A point of a solution region where two of its boundary lines intersect, is called	A. Boundary B. Inequality C. Half plane D. Vertex
10	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None
11	If 4 - x >5, then	A. x > 1 B. x > -1 C. x < 1 D. x < -1
12	If ab > 0 and a < 0, which of the following is negative?	A. b B. -b C. -a D. $(a - b)^2$
13	If x < y, 2x = A, and 2y = B, then	A. A = B B. A < B C. A < x D. B < y
14	The equation of the sphere thro' the origin and making intercepts a, b, c on co-ordinate axes	A. $x^2 + y^2 + z^2 + ax + by + cz = 0$ B. $x^2 + y^2 + z^2 - 2ax - 2by - 2cz = 0$

	is	C. $x^2 + y^2 + z^2 = a + b + c$ D. $x^2 + y^2 + z^2 - ax - by - cz = 0$
15	The center of the sphore which passes thro' (a, 0, 0), (0, b, 0), (0, 0, c) and (0, 0, 0) is	
16	The equation of the sphere passing thro' (0, 0, 0), (a, 0, 0), (0, b, 0), (9, 0, c) is	A. $x^2 + y^2 + z^2 + 2$ ax +2 by + 2cz = 0 B. $x^2 + y^2 + z^2 - 2$ax - 2 by - 2cz = 0 C. $x^2 + y^2 + z^2 - ax - by - cz = 0$ D. $x^2 + y^2 + z^2 + ax + by + cz = 0$
17	Question Image	A. x-axis B. y-axis C. z-axis D. None of these
18	The intercepts of the plane 2x - 3y + 4z = 12 on the co-ordinate axes are given by	A. 2, -3, 4 B. 6, -4, -3 C. 6, -4, 3 D. 3, -2, 1.5
19	Question Image	
20	Question Image	
21	64.A point (x, y, z) moves parallel to xy plane. Which of the three variables x, y, z remain fixed?	A. z B. x C. y D. x and y
22	The foot of perpendicular from (α, β, γ) only y-axis is	A. (α, 0, 0) B. (0, β, 0) C. (0, 0, γ) D. (0, 0, 0)
23	Question Image	A. Parallel to the plane B. At right angles to the plane C. Lies in the plane D. Meet the plane obliquely
24	Question Image	A. -10 B. 10/7 C. -10/7 D. -7/10
25	Question Image	
26	The points (5, -4, 2),(4, -3, 1),(7, -6, 4),(8, -7, 5) are vertices of a	A. Square B. Parallelogram C. Rectangle D. Rhombus
27	The points (5, 0, 2), (2, -6, 0), (4, -9, 6) and (7, -3, 8) are vertices of a	A. Square B. Rhombus C. Rectangle D. Parallelogram
28	The equations of the line thro' the point (2, 3, -5) and equally inclined to the axis are	
29	The lines l1and l2intersect. The shortest distance between them is	A. Positive B. Negative C. Zero D. Infinity
30	The equation of the plane which bisects the line joining (2, 3, 4) and (6, 7, 8) is	A. x + y + z - 15 = 0 B. x - y + z - 15 = 0 C. x - y - z - 15 = 0 D. x + y + z + 15 = 0