ECAT Pre Engineering Entry Test

Sr	Questions	Answers Choice
1	If uv= Projuv then	A. Uandvare parallel B. vis a unit vector C. Uis a unit vector D. Both b and c
2	If Projvu = Projuv, then	A. Uand vare parallel B. |u|=|v| C. Uandvre perpendicular D. One ofuorv
3	The feasible region which can be enclosed within a circle is called	A. Bounded region B. Convex region C. Unbounded region D. None
4	For different values of k equation 4x+5y =k represents	A. Parallel lines B. Lines parallel to x -axis C. Perpendicular lines D. Lines parallel to y -axis
5	Any horizontal line divided the plane into	A. Left half plane B. Upper and lower half planes C. Infinite number of horizontal liens D. None of these
6	The graph of y < 2 is the	A. Left half plane B. upper half plane C. Right half plane D. Lower half plane
7	The ratio in which the line y- x+ 2 =0 divides the line joining (3,-1) and (8,9) is	A. 2:3 B. -2:3 C. 3:2 D. -3:2
8	A quadrilateral whose diagonals are perpendicular bisector of each other is	A. Square B. Rectangle C. Rhombus D. Parallelogram E. Trapezium
9	Number of lines passing through three non-collinear points is	A. 2 B. 3 C. 1 D. 0 E. ∞
10	(-28,12) divides the join of A(-6,3) and B(5,-2) in ratio	A. 1:2 B. 3:2 C. 2:3 D. 2:1
11	The area of the rhombus whose vertices are A(0,0),B(2,1),C(3,3),D(1,2) is	A. 36 square units B. 3 square units C. 6 square units D. 18 square units
12	A joint equation of the lines through the origin and perpendicular to the lines ax2 +2hxy +by2 =0 is indentical is ax2 +2hxy +by2 =0 if	A. h2 = ab B. a + b =0 C. a = b D. a≠ b E. a = b = 0
13	The angle between lines xy =0 is	A. 45° B. 60° C. 90° D. 180°
14	The ortho center of triangle whose vertices are (0,0)(3,0)(0,4) is	A. (0,0) B. (1,1) C. (2,2) D. (3,3)
		A. Parallel

15	The two lines y = 2x and x =2y are	B. Perpendicular C. Equally inclined with axes D. Congruent
16	The equation of line passing through intersection of line x = 0 and y = 0 and the point (2,2) is	A. y = x B. y = x - 1 C. y = x + 1 D. y = x + 1
17	The obtuse angle between lines = -2 and y = x +2 is	A. 120° B. 135° C. 150° D. 140°
18	The length of perpendicular from (3,1) to 4x +3y +20 =0 is	A. 6 B. 7 C. 3 D. 8
19	If A(a,b) lies on 3x +2y =13 and point B(b,a) lies on x-y =5 then equation of AB is	A. x- y= 5 B. x+ y+ =5 C. x+ y= -5 D. 5x +5y =21
20	If line through (4,3) and (2,k) is perpendicular to y =2x +3, then k =_____	A. -1 B. 1 C. -4 D. 4
21	If k2x2 +2hxy- 4y2 =0 represents two perpendicular lines then	A. k = 2 B. k = ±2 C. k = -2 D. k ≠0
22	The measure of the acute angle between the lines represented by x2 -xy -6y2 =0 is	A. 120° B. 30° C. 130° D. 45°
23	The exterior angle of the interior angle C of he quadrilateral whose vertices are A(5,2),B(-2,3),C(-3,-4),D(4,-5) is	A. 30° B. 60° C. 45° D. 90°
24	The points A(+1,-1),B(3,0),C(3,7),D(1,8) are vertices of	A. Square B. Parallelogram C. Rectangle D. Trapezium
25	Area of the triangle whose vertices are (2,3),(0,1),(0,0) is	A. 6 B. 2 C. 4 D. 1
26	The equation of the line perpendicular to x- axis and passing through (-5,3) is	A. y -3 =0 B. x+ 3 =0 C. y- 3 =∞ D. x +5 =0
27	The point P (5,8) and the origin lie on the side of the line 3x+ 7y+ 15 =0	A. Same side B. P above and origin below C. Opposite side D. P below and origin above
28	The points A(3,1),B(-2,-3),C(2,2) are vertices of an (an)	A. Right triangle B. Equilateral triangle C. Isosceles triangle D. Scalene triangle
29	The line through the intersection of the lines x+ 2y+ 3= 0 : 3x +4y +7 =0 and making equal intercepts on the axes is	A. x+ y+ 1= 0 B. x+ y- 2= 0 C. x+ y+ 2= 0 D. 2x +y +2 =0
30	The straight lines represented by the equation ax2+ 2hxy +by2 =0 intersects at	A. (1,1) B. (0,1) C. (1,0) D. (0,0)