Mathematics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	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
2	The distance of the plane 2x - 3y + 6z + 14 = 0 from the origin is	A. 14 B. 2 C. -2 D. 11
3	The point which divides the line joining the points (2, 4, 5) and (3, 5, -4) in the ratio -2 : 3 lines on	A. ZOX plane B. XOY plane C. YOZ plane D. None of these
4	Question Image	A. 0 B. 2 C. 4/3 D. 5/3
5	The projections of a line segment on x, y, z axes are 12, 4, 3. The length and the direction cosines of the line segment are	
6	The st. lines whose direction cosines satisfy al + bm + cn = 0, fmn + gnl + hlm=0 are perpendicular if	
7	Question Image	A. (3, 1, -2) B. (3, -2, 1) C. (2, -1, 3) D. (-1, -2, -3)
8	The distance of the points (3, 4, 5) from y-axis is	
9	The direction cosines of any normal to the xy-plane are	A. <1, 0, 0> B. <0, 1, 0> C. <1, 1, 0> D. <0, 0, 1>
10	The direction cosines of a line equally inclined with co-ordinate axes are	
11	The points (5, 2, 4)(6, -1, 2) and (8, -7, k) are collinear if k is equal to	A. -2 B. 2 C. 3 D. -1
12	If l, m, n are the d.c.'s of a line, then	A. l2+ m2+ n2= 0 B. l2+ m2+ n2= 1 C. l + m + n = 1 D. l = m = n = 1
13	Which of the following integrals can be evaluated	
14	Question Image	
15	Question Image	A. π B. π/6 C. -π/2 D. 2<span style="color: rgb(34, 34, 34); font-family: "Times New

		Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 224);">π
16	Question Image	A. 0 B. 1 C. 2 D. 4
17	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
18	If the graph of f is entirely below the x-axis, then the value of definite integral is	A. = 0 B. < 0 C. > 0 D. None
19	If the lower limit of an integral is a constant and the upper limit is a variable, then the integral is a	A. Constant function B. Variable value C. Function of upper limit D. All
20	The arbitrary constants involving in the solution can be determined by the given conditions. Such conditions are called	A. Boundaries B. Variable separable C. Initial values D. None
21	Question Image	A. Y = -x log x -x + c B. Y = x log x + x C. Y = x log x - x + c D. None of these
22	Question Image	
23	Question Image	
24	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
25	Question Image	A. A variable B. A constant C. 0 D. None of these
26	Question Image	
27	Question Image	
28	Which of the following integrals can be evaluated	
29	Question Image	
30	Question Image	