ECAT Computer Science Entry Test

Sr	Questions	Answers Choice
1	Question Image	A. A(α) - A(β) B. A(α) + A(β) C. A(α-β) D. A(α+β)
2	Question Image	A. 6, -12, -18 B. -6, 4, 9 C. -6, -4, -9 D. -6, 12, 18
3	The order of the matrix A is 3 x 2 and that of B is 2 x 3. The order of the matrix BA is	A. 3 x 3 B. 3 x 2 C. 2 x 5 D. 5 x 2
4	Question Image	A. 0 B. 1 C. 2 D. 4
5	If the trace of matrix A is 5, then the trace of the matrix 3A is	A. 3/5 B. 5/3 C. 8 D. 15
6	If for the matrix A, $A^5 = I$, then $A^{-1} =$	A. A² B. A³ C. A D. None of above
7	Question Image	A. I B. |A| C. |A| I D. None of these
8	For a square matrix A, if $A = A^t$, then A is called	A. matrix B. Transpose C. Symmetric D. Non-symmetric
9	If $A = [a_{ij}]$ is (m x n) matrix, then transpose of A is of the order	A. m x m B. m x n C. n x n D. n x m
10	We also the system of non-homogeneous linear equations by	A. a and b B. b and c C. c and a D. a, b and c
		A. (0, 0, 0)

11	Trival solution of homogeneous linear equation is	B. (1, 2, 3) C. (1, 3, 5) D. a, b and c
12	For non-trival solution |A| is	A. A = 0 B. A^t= 0 C. |A| = 0 D. None of these
13	For trival solution |A| is	A. A B. |A| is non zero C. A = 0 D. None of these
14	System of linear equations is inconsistent if	A. System has no solution B. System has one solution C. System has two solution D. None of above
15	An equation of the form ax + by = k is homogeneous linear equation when:	
16	Question Image	
17	Question Image	A. A B. -A C. A^t D. A⁻
18	Question Image	A. A⁻ B. A^t C. -A D. A
19	The square matrix A is skew-symmetric when At=	A. -B B. -C C. -A D. -D
20	A square matrix A = [aij] is upper triangular when	A. cij = 0 B. bij = 0 C. aij = 0 for all i > j D. dij = 0
21	A square matrix A = [aij] is lower triangular matrix when:	A. aij = 0 for all i < j B. bij = 0 C. cij = 0 D. dij =0
22	Question Image	A. Singular B. Non-singular C. Adjoint D. None of above
23	Matrices A = [aij] 2 x 3 and B =[bij] 3 x 2 are suitable for	A. BA B. A² C. AB D. B²
24	Question Image	
25	Question Image	A. a = -1/2, b = -1 B. a = 1, b = 2 C. a = 2, b = 3 D. None of above
26	Question Image	A. x =0, y =4 B. x = -1, y = 2 C. x = 2, y = 3 D. x = 3, y = 4
27	Question Image	
28	A and B be two square matrices and if their inverse exist, the $(AB)^{-1}$=	A. A⁻¹B⁻¹ B. AB⁻¹ C. A⁻¹B D. B⁻¹A⁻¹
29	Question Image	A. I B. 14 I C. 0 D. None of these
30	If A and B are two matrices such that AB = B and BA =A, then A^2+ B^2=	A. 2 AB B. 2 BA C. A + B D. AB