Mathematics ECAT Pre Engineering Chapter 5 Matrices and Determinants Online Test

Sr	Questions	Answers Choice
1	Trival solution of homogeneous linear equation is	A. (0, 0, 0) B. (1, 2, 3) C. (1, 3, 5) D. a.b and c
2	For non-trival solution |A| is	A. non zero B. A = 0 C. |A| = 0 D. At = 0
3	For trival solution |A| is	A. A B. |A| = 0 C. A = 0 D. |A|≠ 0
4	System of linear equation is inconsistent if	A. System has no solution B. System has one solution C. System has two solution D. None of above
5	An equation of the form ax + by = k is homogeneous linear equation when	A. b = 0, a = 0 B. a = 0,b ≠ 0 C. b = -0,a≠ 0 D. a≠ 0,b≠ 0, k = 0
6	The matrix A is Hermitian when (A)' =	A. A B. -A C. A D. A'
7	The square matrix A is skew Hermitian when (A)'=	A. A B. A' C. -A D. A
8	The square matrix A is skew-symmetric when At =	A. -B B. -C C. -A D. -D
9	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
10	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
11	Cofactor of an element aij denoted by Aij is	A. (-2)i+j B. Mij C. (-1)i+j Mij D. None of above
12	Matrices A = [aij] 2 x 3 and B = [bij] 3 x 2 are suitable for	A. BA B. A2 C. AB D. B2
13	A and B be two square matrices and if their inverse exist the (AB)-1 =	A. A-1 B-1 B. AB-1 C. A-1B D. B-1A-1
14	If A and B are two matrices such that AB = B and BA = A then A2 + B2 =	A. 2 AB B. 2 BA C. A + B D. AB
15	If A is a skew-symmetric matrix of order n and P, any square matrix of order n.prove that P' AP is	A. Skew-symmetric B. Symmetric C. Null D. Diagonal

16	(ABC)' =	A. CBA' B. CBA C. C'B'A D. C'B'A'
17	For any positive integer n	A. ABn = Bn A ⇔ AB = BA B. ABn = Bn A⇔ A,B are square matrices and AB = BA C. ABn = BnA⇔ A + B D. ABn = BnA ⇔ A and B are square matries
18	A diagonal matrix is always	A. Identity B. Triangular C. Scalar D. Non-singular
19	The matrix A = [aij]mxn with m ≠n is always	A. Symmetric B. Hermition C. Skew-symmetric D. None
20	The matrix A = [aij]1xn is a	A. Vector B. Rectangular matrix C. Column vector D. Square matrix
21	The matrix A = [aij]mxn with m≠n is	A. Rectangular B. Symmetric C. Square D. None
22	If the matrices A and B have the order 1 x 10 and 10 x 1 then order of AB is	A. 1 x 1 B. 1 x 10 C. 10 x 10 D. 10 x 1
23	If A and B are skew-symmetric then (AB)t is	A. At Bt B. AB C. -AB D. BA
24	Every identity matrix is	A. Row-vector B. Scalar C. Column-vector D. All
25	A non-homogeneous linear system AX = B has no solution if	A. |A| = 0 B. |A|≠ 0 C. Rank (a) = no of variables D. Rank > no of variables
26	If A is a non-singular matrix then adj A is	A. Non-singular B. Symmetric C. Singular D. Non defined
27	Matrix multiplication is	A. Commutative B. Not commutative C. Not associative D. Not distributive
28	If A = [aij]mxpand B =[aij]pxnthen order of BA is	A. m x n B. p x n C. n x m D. None of these
29	A = [3] is a/an	A. Square matrix B. Scalar matrix C. Diagonal matrix D. Identity matrix
30	Question Image	D. all are correct