

ECAT Mathematics Chapter 5 Matrices and Determinants

| Sr | Questions | Answers Choice |
|----|--|---|
| 1 | If A and B are skew-symmetric then $(AB)^t$ is | A. At Bt B. AB C. -AB D. BA |
| 2 | Question Image | |
| 3 | A diagonal matrix in which the diagonal elements are equal is called a | A. Null matrix B. Identity matrix C. Scalar matrix D. Row matrix |
| 4 | $(ABC)^t =$ | A. CBA' B. CBA C. C' B' A' D. None of these |
| 5 | If order of A is $m \times n$, then order of A^t is | A. $m \times m$ B. $n \times n$ C. $m \times n$ D. $n \times m$ |
| 6 | Question Image | |
| 7 | Two matrices A and B are conformable for the product AB if | A. Both A and B are square B. Both A and B are symmetric C. Number of rows of A = number of columns of B D. Number of columns of A = number of rows of B |
| 8 | Question Image | A. 16 B. 256 C. 64 D. 1024 |
| 9 | 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 |
| 10 | The matrix $A = [a_{ij}]_{m \times n}$ with $m \neq n$ is | A. Rectangular B. Symmetric C. Square D. None |
| 11 | A matrix with a single column is called | A. Column matrix B. Row matrix C. Identity matrix D. Null matrix |
| 12 | Question Image | |
| 13 | Question Image | A. I B. 14 I C. 0 D. None of these |
| 14 | Question Image | A. $a^2 + b^2 + c^2$ B. $4a^2 + b^2 + c^2$ C. 4abc D. None |
| 15 | Question Image | |
| 16 | Every identity matrix is | A. Row-vector B. Scalar C. Column-vector D. All |
| 17 | For non-trivial solution $ A $ is | A. non zero B. $A = 0$ |

C. $|A| = 0$
D. $A^t = 0$

18 Which of the following is skew symmetric matrix

19 For a square matrix A, if $A = A^t$, then A is called

A. Matrix
B. Transpose
C. Symmetric
D. Non-symmetric

20 A and B be two square matrices and if their inverse exist, the $(AB)^{-1} =$

A. $A^{-1}B^{-1}$
B. AB^{-1}
C. $A^{-1}B$
D. $B^{-1}A^{-1}$