

ECAT Mathematics Chapter 5 Matrices and Determinants Online Test

Sr	Questions	Answers Choice
1	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. k^3 B. 0 C. $3k$ D. k^6
2	If A and B are two matrices such that $AB = B$ and $BA = A$ then $A^2 + B^2 =$	A. $2AB$ B. $2BA$ C. $A + B$ D. AB
3	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
4	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
5	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
6	The transpose of a zero matrix is a _____	A. Column matrix B. Zero matrix C. Row matrix D. Scalar matrix
7	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. $a = -1/2, b = -1$ B. $a = 1, b = 2$ C. $a = 2, b = 3$ D. None of above
8	If $A = [a_{ij}]$ is $(m \times n)$ matrix, then transpose of A is of the order	A. $m \times m$ B. $m \times n$ C. $n \times n$ D. $n \times m$
9	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. 16 B. 256 C. 64 D. 1024
10	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
11	The matrix $A = [a_{ij}]_{m \times n}$ with $m \neq n$ is	A. Rectangular B. Symmetric C. Square D. None
12	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. 1 B. $14I$ C. 0 D. None of these
13	The order of the matrix A is 3×2 and that of B is 2×3 . The order of the matrix BA is	A. 3×3 B. 3×2 C. 2×5 D. 5×2
14	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
15	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
16	If $A = [a_{ij}]_{m \times p}$ and $B = [a_{ij}]_{p \times n}$ then order of BA is	A. $m \times n$ B. $p \times n$ C. $n \times m$ D. None of these
17	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. 2×2 B. 2×3 C. 3×2 D. 3×3

D. 3×3

18 A square matrix $A = [a_{ij}]$ is upper triangular when

- A. $c_{ij} = 0$
- B. $b_{ij} = 0$
- C. $a_{ij} = 0$ for all $i > j$
- D. $d_{ij} = 0$

19 For any positive integer n

- A. $AB^n = B^n A \Leftrightarrow AB = BA$
- B. $AB^n = B^n A \Leftrightarrow A, B$ are square matrices and $AB = BA$
- C. $AB^n = B^n A \Leftrightarrow A + B$
- D. $AB^n = B^n A \Leftrightarrow A$ and B are square matrices

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- A. Orthogonal
- B. Involutary
- C. Idempotent
- D. Nilpotent