
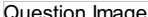









ECAT Mathematics Chapter 5 Matrices and Determinants Online Test

Sr	Questions	Answers Choice
1	The square matrix A is skew-symmetric when $A^t =$	A. -B B. -C C. -A D. -D
2	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. $d_{ij} = 0$
3	A square matrix $A = [a_{ij}]$ is lower triangular matrix when:	A. $a_{ij} = 0$ for all $i < j$ B. $b_{ij} = 0$ C. $c_{ij} = 0$ D. $d_{ij} = 0$
4	Question Image	A. Singular B. Non-singular C. Adjoint D. None of above
5	Matrices $A = [a_{ij}]$ 2×3 and $B = [b_{ij}]$ 3×2 are suitable for	A. BA B. $A^{2 \times 3}$ C. AB D. $B^{3 \times 2}$
6	Question Image	
7	Question Image	A. $a = -1/2, b = -1$ B. $a = 1, b = 2$ C. $a = 2, b = 3$ D. None of above
8	Question Image	A. $x = 0, y = 4$ B. $x = -1, y = 2$ C. $x = 2, y = 3$ D. $x = 3, y = 4$
9	Question Image	
10	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. $B^{-1}A^{-1}$
11	Question Image	A. I B. $14I$ C. 0 D. None of these
12	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
13	Question Image	
14	Question Image	A. 3, -3, 11 B. 3, 3, 11 C. -3, 3, -11 D. -3, -3, 11
15	Question Image	
16	Question Image	A. $a^2b^2c^2$ B. $4a^2b^2c^2$ C. $4abc$ D. None
17	Question Image	
18	Question Image	A. 1 B. -1

18		<p>C. 0</p> <p>D. I</p>
19	Let A be a square matrix. Then, $\frac{1}{2}(A-A')$ is	<p>A. Skew-symmetric</p> <p>B. Symmetric</p> <p>C. Null</p> <p>D. None of the above</p>
20	If A is a skew-symmetric matrix of order n and P, any square matrix of order n, prove that $P'AP$ is	<p>A. Skew-symmetric</p> <p>B. Symmetric</p> <p>C. Null</p> <p>D. Diagonal</p>
21	$(ABC)' =$	<p>A. CBA'</p> <p>B. CBA</p> <p>C. $C' B' A'$</p> <p>D. None of these</p>
22		<p>A. 1</p> <p>B. 0</p> <p>C. -1</p> <p>D. 2</p>
23		<p>A. 1</p> <p>B. 0</p> <p>C. 3</p> <p>D. -1</p>
24		<p>A. -3</p> <p>B. -7</p> <p>C. 1</p> <p>D. 0</p>
25		<p>A. $A^2 - 5A + 7I = 1$</p> <p>B. $2A^2 - 3A + 7I = 0$</p> <p>C. $A^2 - 5A + I = 0$</p> <p>D. $A^2 - 5A + 7I = 0$</p>
26		
27		
28		<p>A. $a = 2, b = 3$</p> <p>B. $a = 3, b = 2$</p> <p>C. $a = 2, b = 1, 2$</p> <p>D. $a = 3, b = 3$</p>
29	Which of the following is an identity matrix?	<p>D. none of these</p>
30		<p>A. 0</p> <p>B. 1</p> <p>C. -A</p> <p>D. -1</p>