

## ECAT Mathematics Chapter 5 Matrices and Determinants

| Sr | Questions   | Answers Choice   |
|----|---|--|
| 1  | Question Image  |  |
| 2  | Trival solution of homogeneous linear equation is                                     | A. (0, 0, 0)<br>B. (1, 2, 3)<br>C. (1, 3, 5)<br>D. a, b and c                                      |
| 3  | The transport of a rectangular matrix is a  | A. Square matrix<br>B. <b>Rectangular matrix</b><br>C. Row matrix<br>D. Column matrix              |
| 4  | Question Image  | A. 3K<br>B. K2<br><b>C. K3</b><br>D. K   |
| 5  | Question Image  |  |
| 6  | Question Image  | A. 16<br>B. <b>256</b><br>C. 64<br>D. 1024   |
| 7  | Cofactor of an element $a_{ij}$ denoted by $A_{ij}$ is                                | A. $(-2)^{i+j}$<br>B. $M_{ij}$<br><b>C. <math>(-1)^{i+j} M_{ij}</math></b><br>D. None of above     |
| 8  | Question Image  |  |
| 9  | The transport of a square matrix is a   | A. Row matrix<br>B. Column matrix<br><b>C. Square matrix</b><br>D. Null matrix                     |
| 10 | A non-homogeneous linear system $AX = B$ has no solution if                           | A. $ A  = 0$<br>B. $ A  \neq 0$<br>C. Rank (a) = no of variables<br>D. Rank > no of variables      |
| 11 | Question Image  |  |
| 12 | Matrices are represented by   | A. Natural numbers<br>B. Real numbers<br>C. Small letters<br><b>D. Capital letters</b>             |
| 13 | The square matrix A is skew-symmetric when $A^t =$                                    | A. -B<br>B. -C<br><b>C. -A</b><br>D. -D  |
| 14 | Matrices $A = [a_{ij}]$ $2 \times 3$ and $B = [b_{ij}]$ $3 \times 2$ are suitable for | A. $BA$<br>B. $A^2$<br><b>C. <math>AB</math></b><br>D. $B^2$                                       |
| 15 | Question Image  |  |
| 16 | Question Image  | A. $(2 \times 4)$<br><b>B. <math>(2 \times 7)</math></b><br>C. $(2 \times 3)$<br>D. $(7 \times 2)$ |
| 17 | Question Image  | A. $k^3$<br>B. 0<br><b>C. <math>3k</math></b><br>D. $k^6$  |
| 18 | $(ABC)^t =$   | A. $CBA'$<br>B. $CBA$<br><b>C. <math>C'B'A</math></b><br>D. $CBA$                                  |

19 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.  $AB$

20 Question Image

- A. 1
- B. -1
- C. 0
- D. I