

Objective type Exercise

Q.1 Each questions has four possible answers. Choose the correct answer and encircle it.

- ___ 1. The order of the matrix $\begin{bmatrix} 2 \\ 3 \\ 4 \end{bmatrix}$ is
(a) 2×1 (b) 2×2 (c) 3×1 (d) 1×3
- ___ 2. The order of the matrix $[1 \ 2 \ 3]$ is
(a) 1×3 (b) 3×1 (c) 3×3 (d) 2×3
- ___ 3. The matrix $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$ is called
(a) Identity (b) scalar (c) diagonal (d) Null
- ___ 4. Two matrices A and B are conformable for multiplication if
(a) No of columns in A = No of rows in B
(b) No of columns in A = No of columns in B
(c) No of rows in A = No of rows in B
(d) None of these
- ___ 5. If the order of the matrix A is $p \times q$ and order of B is $q \times r$, then order of AB will be:
(a) $p \times q$ (b) $q \times p$ (c) $p \times r$ (d) $r \times p$
- ___ 6. In an identity matrix all the diagonal elements are:
(a) zero (b) 2 (c) 1 (d) none of these
- ___ 7. The value of determinant $\begin{bmatrix} 2 & 0 \\ 1 & 3 \end{bmatrix}$ is:
(a) 6 (b) -6 (c) 1 (d) 0
- ___ 8. If two rows of a determinant are identical then its value is
(a) 1 (b) zero (c) -1 (d) None of these
- ___ 9. If $A = \begin{bmatrix} 2 & 3 & 4 \\ 0 & 1 & -1 \\ 2 & 0 & 1 \end{bmatrix}$ is a matrix, then Cofactor of 4 is
(a) -2 (b) 2 (c) 3 (d) 4
- ___ 10. If all the elements of a row or a column are zero, then value of the determinant is:
(a) 1 (b) 2 (c) zero (d) None of these
-

- ___ 11. Value of m for which matrix $\begin{bmatrix} 2 & 3 \\ 6 & m \end{bmatrix}$ is singular.
 (a) 6 (b) 3 (c) 8 (d) 9
- ___ 12. If $[a_{ij}]$ and $[b_{ij}]$ are of the same order and $a_{ij} = b_{ij}$ then the matrix will be
 (a) Singular (b) Null (c) unequal (d) equal
13. Matrix $[a_{ij}]_{m \times n}$ is a row matrix if:
 (a) $i = 1$ (b) $j = 1$ (c) $m = 1$ (d) $n = 1$
14. Matrix $[c_{ij}]_{m \times n}$ is a rectangular if:
 (a) $i \neq j$ (b) $i = j$ (c) $m = n$ (d) $m - n \neq 0$
15. If $A = [a_{ij}]_{m \times n}$ is a scalar matrix if:
 (a) $a_{ij} = 0 \quad \forall i \neq j$ (b) $a_{ij} = k \quad \forall i = j$
 (c) $a_{ij} = k \quad \forall i \neq j$ (d) (a) and (b)
16. Matrix $A = [a_{ij}]_{m \times n}$ is an edentity matrix if:
 (a) $\forall i = j, a_{ij} = 0$ (b) $\forall i = j, a_{ij} = 1$
 (c) $\forall i \neq j, a_{ij} = 0$ (d) both (b) and (c)
17. Which matrix can be tectangular mayrix ?
 (a) Diagonal (b) Identity (c) Scalar (d) None
18. If $A = [a_{ij}]_{m \times n}$ then order kA is:
 (a) $m \times n$ (b) $km \times kn$ (c) $km \times n$ (d) $m \times kn$
19. $(A - B)^2 = A^2 - 2AB + B^2$, if and only if :
 (a) $A + B = 0$ (b) $AB - BA = 0$ (c) $A^2 + B^2 = 0$ (d) (a) and c
20. If A and B ARE symmetric , then $AB =$
 (a) BA (b) $A^t B^t$ (c) $B^t A^t$ (d) (a) and (c)

Answers

- Q.1 (1) c (2) a (3) d (4) a (5) c (6) c
 (7) a (8) b (9) a (10) c (11) d (12) d
 (13) c (14) d (15) d (16) d (17) d (18) a
 (19) b (20) d
-