Advanced Mathematical techniques in Chemical Engineering

Module V : Matrix, determinants and properties

Exercises

Write True/False

1. If all rows are interchanged with all columns, the determinant of generated matrix is same as the original matrix.

2. If all elements of a column of a matrix are multiplied by scalar k, then determinant of the resultant matrix is 1/k times that of original matrix.

3. For a diagonal matrix, on diagonal elements are 1 and half of off diagonal elements are 0.

4. A and B are conformable matrices, if A has same number of columns and B has same number of rows.

5. For a singular matrix, its inverse exists.

6. For skew-symmetric matrix, $A^T=-A$

7. For orthogonal matrix, $A^T=-A$

8. $(AB)=B^{-1}A^{-1}$