Key Takeaways

Singular/Non-singular Matrices

- A square matrix A is said to be singular or non – singular according as $|A| = 0$ or $|A| \neq 0$ respectively.

Co-factor matrix and Adjoint (Adjugate) matrix

- Let $A = [a_{ij}]_n$ be a square matrix
  - The matrix obtained by replacing each element of A by corresponding co factor is called a co factor matrix .

    $C = [c_{ij}]_n$, where c_{ij} is co factor of a_{ij} , $\forall\ i\ \&\ j$

    $C_{ij} = (-1)^{i+j} M_{ij}$
  - Transpose of co factor matrix of A is called adjoint of matrix A, and is denoted by $adj\ (A)$.

    $adj\ (A) = [d_{ij}]_n$, where $d_{ij} = c_{ji}$, $\forall\ i\ \&\ j$

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