## Evaluation of Determinants.

If A is a square matrix of order 2, then its determinant can be easily found. But to evaluate determinants of square matrices of higher orders, we should always try to introduce zeros at maximum number of places in a particular row (column) by using the properties and then we should expand the determinant along that row (column).

We shall be using the following notations to evaluate a determinant:

(1) $R_i$ to denote $i^{th}$ row.

(2) $R_i \leftrightarrow R_j$ to denote the interchange of $i^{th}$ and $j^{th}$ rows.

(3) $R_i \to R_i + \lambda R_j$ to denote the addition of $\lambda$ times the elements of $j^{th}$ row to the corresponding elements of $i^{th}$ row.

(4) $R_i(\lambda)$ to denote the multiplication of all element of $i^{th}$ row by $\lambda$.

Similar notations are used to denote column operations if R is replaced by C.