4. SIMPLIFICATION

IMPORTANT CONCEPTS

I. 'BODMAS'Rule: This rule depicts the correct sequence in which the operations are to be executed,so as to find out the value of a given expression.

Here, 'B' stands for 'bracket' ,'O'for 'of' , 'D' for' division' and 'M' for 'multiplication', 'A' for 'addition' and 'S' for 'subtraction'.
Thus, in simplifying an expression, first of all the brackets must be removed, strictly in the order(), {} and [].

After removing the brackets, we must use the following operations strictly in the order:
(1)of (2)division (3) multiplication (4)addition (5)subtraction.

II. Modulus of a real number : Modulus of a real number a is defined as

$$|a| = \begin{cases} a, & \text{if } a>0 \\ -a, & \text{if } a<0 \end{cases}$$

Thus, $|5|=5$ and $|-5|=-(-5)=5$.

III. Virnaculum (or bar): When an expression contains Virnaculum, before applying the 'BODMAS' rule, we simplify the expression under the Virnaculum.