Bachelor of Science

Semester :- 5

Group theory

Group Theory

Basic Concept of Group

Binary Operation:-

Let G be Non-empty set then (*) is called binary operation if * is closed in g i.e. a*b ∈ G; for all a,b ∈ G.

Example 1 :-

Let G = N (Set of Natural Number) then '+' is binary operation because a + b $\in$ N; For all a,b $\in$ N but 'N' is not binary operation because $1 \in N, 2 \in N$ and $1 - 2 = -1 \neq N$

Example 2 :-

Let G = Q (set of Rational Number) the '+' , '-', * all are binary operation.

Let G = R (set of Real Number) then '+' , '-', * all are binary operation.