PREDICATE CALCULUS :

A declarative sentence contains subject & preclicate A part of a declarative sentence describing the properties of an object or relation among object is called a predicate

Eg: Tiger is an wild animal
S P

It is denoted as $p(s)$

Statement functions :

A simple statement functions of one variable is defined to be an expression consisting of a predicate symbol and an individual variable. when a variable is replaced by name of any subject then it becomes a statement function.

$S(x)$: x is red.

$x \to$ Rose : Rose is red.

COMPOUND STATEMENT FUNCTION:

It is obtained by combining one or more simple statement functions using logical connective

$M(x)$: x is a mathematician.

$N(x)$: x is an intelligent.

$M(x) \wedge N(x)$

$M(x) \vee N(x)$

$M(x) \rightarrow N(x)$

A statement function of two variables is an expression consisting of a predicate symbol and two individual variables.

$G(x, y)$: x is taller than y

$\Rightarrow$ Laxmanan is taller than Kaushikyan.

QUANTIFIER:

A quantifier is the one which is used to quantify the nature of variable.

Types of quantifiers : there are 2 types of quantifiers are universal quantifier and existential quantifier.