



# Classification of System of Units

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## UNITS

### Necessity

All physical quantities are to be measured in terms of standard quantities.

### What is Unit

A unit is defined as a standard or fixed quantity of one kind used to measure other quantities of the same kind.

### Classification

Fundamental units and derived units are the two classifications

### Fundamental units

Units of basic quantities of length, mass and time.

### Derived units

Units which are derived from basic units and bear a constant relationship with the fundamental units. E.g. area, volume, pressure, force etc.

### Systems of units

**F.P.S** :- system is the British system in which the basic Units of length, mass and time are foot, pound and second respectively.



**C.G.S** :- C.G.S system is the metric system in which the basic units of length, mass and time are centimeter, gram and seconds respectively.

**M.K.S** :- M.K.S system is another metric system in which the basic units of length, mass and time are metre, kilo- gram and second respectively.

**S.I** :- S.I. units are referred to as Systems International units which is again of metric and the basic units, their names and symbols are as follows.

**Fundamental units of F.P.S, C.G.S, M.K.S and S.I**

S.No.	Basic quantity	British units		Metric units				International units	
		F.P.S	Symbol	C.G.S	Symbol	M.K.S	Symbol	S.I Units	Symbol
1	Length	Foot	ft	Centimetre	cm	Metre	m	Metre	m
2	Mass	Pound	lb	Gram	g	Kilogram	kg	Kilogram	Kg
3	Time	Second	s	Second	s	Second	s	Second	s
4	Current	Ampere	A	Ampere	A	Ampere	A	Ampere	A
5	Temperature	Fahrenheit	°F	Centigrade	°C	Centigrade	°C	Kelvin	K
6	Light intensity	Candela	Cd	Candela	Cd	Candela	Cd	Candela	Cd