

UNIT AND MEASUREMENT

• Fundamental Units

St. No.	Physical Quantity	SI Unit	Symbol
1	Length	Metre	m
2	Mass	Kilogram	Kg
3	Time	Second	s
4	Electric Current	Ampere	A
5	Temperature	Kelvin	K
6	Luminous intensity	Candela	Cd
7	Amount of Substance	Mole	mol

• Supplementary Units

Sr. No	Physical Quantity	SI Unit	Symbol
1.	Plane Angle	Radian	
2	Solid Angle	Steradian	Sr

(1). Distance of an object by parallax method, $D = \frac{Bis}{\text{Parallax angle}}$

(2). Absolute error = True value – Measured value = Δa_n

(3). True value = Arithmetic mean of the measured values

$$a_{\text{mean}} = \frac{a_1 + a_2 + \dots + a_n}{n}$$

(4). Relative error in the measurement of a quantity = $\frac{\Delta a_{\text{mean}}}{a_{\text{mean}}}$

(5). Percentage error = $\frac{\Delta a_{\text{mean}}}{a_{\text{mean}}} \times 100\%$

(6). Maximum permissible error in addition or subtraction of two quantities ($A \pm \Delta A$) and ($B \pm \Delta B$);
 $= \Delta A + \Delta B$

171. When $z = \frac{a \pm \Delta a}{b \pm \Delta b}$ then maximum relative error in z is $\frac{\Delta z}{z} = \frac{\Delta a}{a} + \frac{\Delta b}{b}$