

## Order of Magnitude.

In scientific notation the numbers are expressed as,  $\text{Number} = M \times 10^x$ . Where M is a number lies between 1 and 10 and x is integer. Order of magnitude of quantity is the power of 10 required to represent the quantity. For determining this power, the value of the quantity has to be rounded off. While rounding off, we ignore the last digit which is less than 5. If the last digit is 5 or more than five, the preceding digit is increased by one. For example,

(1) Speed of light in vacuum =  $3 \times 10^8 \text{ ms}^{-1} \approx 10^8 \text{ m / s}$  (ignoring 3 < 5)

(2) Mass of electron =  $9.1 \times 10^{-31} \text{ kg} \approx 10^{-30} \text{ kg}$  (as 9.1 > 5).