| Sr. No. | Quantity | Symbol | Units (SI) | Dimensions |
|---|---|---|---|---|
| **A** | **Fundamental** | | | |
| 1 | Mass | M | Kg | $M^1L^0T^0\theta^0$ |
| 2 | Length | L | m | $M^0L^1T^0\theta^0$ |
| 3 | Time | T | Sec | $M^0L^0T^1\theta^0$ |
| 4 | Temperature | θ | K | $M^0L^0T^0\theta^1$ |
| 5 | Heat | Q, H | Joule | $M^1L^2T^{-2}$ |
| **B** | **Geometric** | | | |
| 1 | Area | A | $m^2$ | $L^2$ |
| 2 | Volume | V | $m^3$ | $L^3$ |
| **C** | **Kinematic** | | | |
| 1 | Linear Velocity | u, v | m/s | $L^1T^{-1}$ |
| 2 | Angular Velocity | ω | rad/s | $T^{-1}$ |
| 3 | Acceleration | a | $m/s^2$ | $L^1T^{-2}$ |
| 4 | Angular | α | $rad/s^2$ | $T^{-2}$ |
| 5 | Discharge | Q | $m^3/sec$ | $L^3T^{-1}$ |
| 6 | Kinematic Viscosity | ν | $m^2/sec$ | $L^2T^{-1}$ |
| **D** | **Dynamic** | | | |
| 1 | Force / Resistance | F/R | N ($kg\text{-}m/s^2$) | $M^1L^1T^{-2}$ |
| 2 | Density | ρ | $Kg/ m^3$ | $M^1L^{-3}$ |
| 3 | Specific Weight | w | $N/ m^3$ | $M^1L^{-2}T^{-2}$ |
| 4 | Dynamic Viscosity | μ | Kg/m-sec | $M^1L^{-1}T^{-1}$ |
| 5 | Work, Energy | W, E | N-m (Joule) | $M^1L^2T^{-2}$ |
| 6 | Power | P | Watt (J/sec) | $M^1L^2T^{-3}$ |
| **E** | **Thermodynamic** | | | |
| 1 | Thermal Conductivity | K | W/m-K | $M^1L^1T^{-3}\theta^{-1}$ |
| 2 | Specific Heat | $C_p$, $C_v$ | kJ/kg-K | $L^2T^{-2}\theta^{-1}$ |
| 3 | Heat Transfer Co efficient | h | $W/m^2\text{-}K$ | $M^1T^{-3}\theta^{-1}$ |
| 4 | Gas Constant | R | J/kg-K | $L^2T^{-2}\theta^{-1}$ |
| 5 | Thermal Diffusivity | α | $m^2/sec$ | $L^2T^{-1}$ |