energy, *E*

In mechanics the sum of potential energy and kinetic energy. In thermodynamics the internal energy or thermodynamic energy increase, ΔU, is the sum of heat and work brought to the system. Only changes in energy are measurable. For photons

$$E = h\,\nu$$

where h is the Planck constant and ν the frequency of radiation. In relativistic physics

$$E = m\,c^2$$

where c is the speed of light and m the mass.

Source:
Green Book, 2nd ed., p. 12