Matter and Motion Fall 2015

Chemistry Midterm Equations, Conversion Factors and Constants

$c = 3.00 \times 10^{8}$ m/s

$h = 6.626 \times 10^{-34}$ Js

$N = 6.022 \times 10^{23}$ mol^{-1}

$e = 1.602 \times 10^{-19}$ Coulombs

1 in. = 2.54 cm

0 K = -273.15 °C

$°C = \frac{5}{9}(°F - 32)$

$°F = \frac{9}{5}(°C) + 32$

$E = h\nu$

$c = \lambda\nu$

$\frac{1}{\lambda} = R\left(\frac{1}{n_{final}^2} - \frac{1}{n_{initial}^2}\right)$ where $R = 1.097 \times 10^{7}$ m^{-1}