# AQA

**Applied General Science
(TVQ01028, TVQ01029) formulae**

**For use in exams from the January 2017 series onwards**

## BIOLOGY

- **Magnification = $\dfrac{\text{observed size}}{\text{actual size}}$**

## CHEMISTRY

- **moles = $\dfrac{\text{mass}}{M_r}$**

- **PV = nRT**

- **Q = mcΔT**

- **moles = vol ($dm^3$) × concentration (mol $dm^{-3}$)**

## PHYSICS

**Energy and Efficiency**

- **efficiency = $\dfrac{\text{useful energy (or power) output}}{\text{total energy (or power) input}}$**

- **U = $\dfrac{Q}{At\,\Delta T}$**

## ELECTRICITY  AND  CIRCUITS

- $I = Q/t$

- $P = IV$

- $I = V/R$

- rate of heat loss = $I^2R$

- $R_{total} = R_1 + R_2 + R_3$

- $1/R_{total} = 1/R_1 + 1/R_2 + 1/R_3$

## DYNAMICS

- $F = ma$

- $p = mv$

- $F = \Delta p/t$

- (average) $v = s/t$

- $v = u + at$

- $v^2 = u^2 + 2as$

- $s = ut + \dfrac{1}{2} at^2$

- $GPE = mgh$

- $KE = \dfrac{1}{2} mv^2$

- $P = E/t$

- weight = $mg$