



Level 3 Certificate / Extended Certificate
APPLIED GENERAL SCIENCE

Formulae Sheet

Insert

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

For use in exams from the January 2017 series onwards

[Turn over]

BIOLOGY

- Magnification = $\frac{\text{observed size}}{\text{actual size}}$

CHEMISTRY

- moles = $\frac{\text{mass}}{M_r}$
- $PV = nRT$
- $Q = mc\Delta T$
- moles = vol (dm³) × concentration (mol dm⁻³)

PHYSICS

Energy and Efficiency

- efficiency = $\frac{\text{useful energy (or power) output}}{\text{total energy (or power) input}}$
- $U = \frac{Q}{At\Delta T}$

Electricity and Circuits

- $I = Q/t$
- $P = IV$
- $I = V/R$
- rate of heat loss = I^2R
- $R_{\text{total}} = R_1 + R_2 + R_3$
- $1/R_{\text{total}} = 1/R_1 + 1/R_2 + 1/R_3$

Dynamics

- $F = ma$
- $p = mv$
- $F = \Delta p/t$
- (average) $v = s/t$
- $v = u + at$
- $v^2 = u^2 + 2as$
- $s = ut + \frac{1}{2}at^2$
- $GPE = mgh$
- $KE = \frac{1}{2}mv^2$
- $P = E/t$
- weight = mg

BLANK PAGE

Copyright Information

For confidentiality purposes, all acknowledgements of third-party copyright material are published in a separate booklet. This booklet is published after each live examination series and is available for free download from www.aqa.org.uk.

Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders may have been unsuccessful and AQA will be happy to rectify any omissions of acknowledgements. If you have any queries please contact the Copyright Team.

Copyright © 2023 AQA and its licensors. All rights reserved.

WP/M/Jan23/CD/ASC/INS2/E1