



Oxford Cambridge and RSA

## Level 3 Cambridge Technical in Applied Science

05847/05848/05849/05874/05879

### Data sheet

**Unit 1** Science fundamentals

**Unit 2** Laboratory techniques



### INSTRUCTIONS

- Do **not** send this Insert for marking. Keep it in the centre or recycle it.

### INFORMATION

- This document has **2** pages.

**Unit 1**

Density ( $\text{kg/m}^3$ ) = mass (kg)  $\div$  volume ( $\text{m}^3$ )

Current (A) = number of electrons per  $\text{m}^3$   $\times$  cross-sectional area of conductor ( $\text{m}^2$ )  $\times$  drift velocity ( $\text{m s}^{-1}$ )  $\times$  electron charge (C)

$I = \Delta Q \div \Delta t$

Potential difference (V) = current (A)  $\times$  resistance ( $\Omega$ )

Charge (C) = current (A)  $\times$  time (s)

Power (W) = energy (J)  $\div$  time (s)

Power (W) = potential difference (V)  $\times$  current (A)

Energy transferred (work done) (J) = charge (C)  $\times$  potential difference (V)

Energy transferred (J, kWh) = power (W, kW)  $\times$  time (s, h)

Area of a circle =  $\pi r^2$

Circumference of a circle =  $2\pi r$

Current flow:

Series  $R_t = R_1 + R_2 + R_3$

Parallel  $\frac{1}{R_t} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$

**Unit 2**

$n = c \times V$

where:

$c$  = concentration ( $\text{mol dm}^{-3}$ )

$n$  = number of moles

$V$  = volume ( $\text{dm}^3$ )

Magnification = measured size  $\div$  actual size

# OCR

Oxford Cambridge and RSA

Copyright Information:

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, OCR (Oxford Cambridge and RSA Examinations), The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.