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OXFORD CAMBRIDGE AND RSA EXAMINATIONS

Level 3 Cambridge Technical in Applied Science

05847/05848/05849/05874/05879

Data sheet

Unit 1 Science fundamentals

Unit 2 Laboratory techniques

INSTRUCTIONS

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UNIT 1

Density (kg/m^3) = mass (kg) \div volume (m^3)

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

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

Potential difference (V) = current (A) \times resistance (Ω)

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 = πr^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 (mol dm⁻³)

n = number of moles

V = volume (dm³)

Magnification = measured size ÷ actual size



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