

# 2026 SPC ANSWER BOOKLET

Name: \_\_\_\_\_ School: \_\_\_\_\_ Account Number: \_\_\_\_\_

## Section A: Multiple choice questions

Please record your answers from **1** to **6** on the exam platform.

## Section B: Longer answer questions

**7. (4 marks)**

**8. (6 marks)**

(a)

---

---

(b)

---

---

---

---

---

---

---

---

---

---

(c)

---

---

---

---

---

---

---

---

**9. (4 marks)**

---

---

---

---

**10. (9 marks)**

(a)

---

---

---

---

(b)

---

---

---

---

(c)

---

---

---

---

---

---

---

---

(d)

---

---

---

---

(e)

---

---

---

---



(b)

---

---

---

---

---

---

---

---

**12. (8 marks)**

(a)

---

---

---

---

---

---

---

---

(b)

---

---

---

---

---

---

---

(c)

---

---

---

**13. (5 marks)**

(a)

---

---

---

---

(b)

---

---

---

---

(c)

---

---

---

---

**END OF THE ANSWER BOOKLET**

## Important Constants

Constant	Symbol	Value
Speed of light in free space	$c$	$3.00 \times 10^8 \text{ m s}^{-1}$
Elementary charge	$e$	$1.60 \times 10^{-19} \text{ C}$
Planck constant	$h$	$6.63 \times 10^{-34} \text{ J s}$
Mass of electron	$m_e$	$9.11 \times 10^{-31} \text{ kg}$
Mass of proton	$m_p$	$1.67 \times 10^{-27} \text{ kg}$
Acceleration of free fall at Earth's surface	$g$	$9.81 \text{ m s}^{-2}$
Avogadro constant	$N_A$	$6.02 \times 10^{23} \text{ mol}^{-1}$
Radius of Earth	$R_E$	$6.37 \times 10^6 \text{ m}$
Radius of Earth's orbit	$R_0$	$1.496 \times 10^{11} \text{ m}$

$$T_{(\text{K})} = T_{(^{\circ}\text{C})} + 273$$

$$\text{Volume of a sphere} = \frac{4}{3}\pi r^3$$

$$\text{Surface area of a sphere} = 4\pi r^2$$

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

$$v = u + at$$

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

$$s = \frac{1}{2}(u + v)t$$

$$E = hf$$

$$R = \frac{\rho \ell}{A}$$

$$P = Fv$$

$$P = E/t$$

$$P = VI$$

$$V = IR$$

$$v = f\lambda$$

$$P = \rho gh$$

$$R = R_1 + R_2$$

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$PV = \text{const.}$$

$$\frac{PV}{T} = \text{const.}$$