

Q1.In which of the following do both quantities have the same unit?

A Electrical resistivity and electrical resistance.

B Work function Planck constant

C Pressure and the Young modulus.

D Acceleration and rate of change of momentum.

(Total 1 mark)

Q2.Which of the following is **not** a unit of power?

A N m s^{-1}

B $\text{kg m}^2 \text{s}^{-3}$

C J s^{-1}

D $\text{kg m}^{-1} \text{s}^{-1}$

(Total 1 mark)

Q3. Which of the following gives a correct unit for $\left(\frac{g^2}{G}\right)$?

A N

B N kg⁻¹

C N m

D N m⁻²

(Total 1 mark)

Q4. Which one of the following is a possible unit of impulse?

A N s⁻¹

B kg ms⁻¹

C kg ms⁻²

D sN⁻¹

(Total 1 mark)

Q5. Which one of the following gives a correct unit for $\left(\frac{g}{G}\right)^2$?

- A $N m^{-2}$
- B $N kg^{-1}$
- C $N m$
- D N

(Total 1 mark)

Q6. Which one of the following **cannot** be used as a unit for electric field strength?

- A $J m^{-1} C^{-1}$
- B $J A^{-1} s^{-1} m^{-1}$
- C $N A^{-1} s^{-1}$
- D $J C m^{-1}$

(Total 1 mark)

Q7. Which of the following is a possible unit for rate of change of momentum?

- A $N s$
- B $N s^{-1}$
- C $kg ms^{-1}$
- D $kg ms^{-2}$

(Total 1 mark)

Q8. Which one of the following could be a unit of gravitational potential?

- A** N
- B** J
- C** N kg^{-1}
- D** J kg^{-1}

(Total 1 mark)

Q9. In parts (i) and (ii) circle the letter that corresponds to the correct answer.

(i) The resistance of a negative temperature coefficient (ntc) thermistor

- A** increases as temperature increases.
- B** is constant at temperatures below $0\text{ }^{\circ}\text{C}$.
- C** increases as temperature decreases.
- D** falls to zero when a critical temperature is reached.

(1)

(ii) The unit of potential difference can be expressed as

- A** C s^{-1}
- B** J C^{-1}
- C** V A^{-1}
- D** J A^{-1}

(1)

(Total 2 marks)

Q10.The fission of one nucleus of uranium 235 releases 200 MeV of energy. What is the value of this energy in J?

- A** 3.2×10^{-25} J
- B** 3.2×10^{-17} J
- C** 3.2×10^{-11} J
- D** 2.0×10^6 J

(Total 1 mark)

Q11.Which line, **A** to **D**, gives correct units for both magnetic flux and magnetic flux density?

	magnetic flux	magnetic flux density
A	Wb m^{-2}	Wb
B	Wb	T
C	Wb m^{-2}	T m^{-2}
D	T m^{-2}	Wb m^{-2}

(Total 1 mark)