

Static and Charge

Q1.a(2020)

Using friction / rubbing (with a duster or cloth) / AW ✓

1

1.2

IGNORE any explanation e.g. mention of positive electrons / protons moving

Q1.b(2020)

Electrons / negative charges move ✓

2

1.1

ALLOW clear indication on the diagram that the minus signs leave the rod for two marks

(Electrons move) from the rod ✓

2.2

ALLOW electrons are lost (from the rod) ✓✓
DO NOT ALLOW any marks for an indication that protons/positive signs/positive electrons move or disappear

Q1.c(2020)

Opposite charges attract ✓

2

2 × 1.2

ALLOW positive (charges) and negative (charges) attract / + and – attract

2nd rod must be negative / – ✓

ALLOW negative signs indicated on left rod

Q2.(2021)

A ✓

Q3.(2022)

D ✓

Q4.a(2023)

Electrons ✓

2

1.1

(Move from the) gold leaf electroscope (to the) positively charged rod ✓

2.1

ALLOW gold or leaf or electroscope for gold leaf electroscope
ALLOW rod for positively charged rod

Q4.b(2023)

Like charges repel / same charges repel / positive charges repel ✓

1

1.1

ALLOW it/gold leaf repels from the positive charge / protons repel

ALLOW same charges push away (as idea of repel)

IGNORE do not attract / same charges cause a force

Q4.c(2023)

Gold leaf drawn downwards and (nearly) vertical ✓	2	2 × 2.1	<p>ALLOW description on answer line e.g., leaf drops (down) / leaf returns to original/start position</p> <p>ALLOW (gold leaf drawn with) arrow indicating downwards direction</p> <p>IGNORE any charges drawn</p>
Electrons flow from the Earth ✓			<p>ALLOW (negative) charges for electrons</p> <p>ALLOW move or transfer for flow</p> <p>ALLOW any correct flow of electrons e.g., electrons flow from finger / electrons flow to cap / electrons flow to electroscope</p> <p>IGNORE vague descriptions e.g., the electrons are lost / it discharges / neutralises</p> <p>DO NOT ALLOW protons moving / positive charges moving / positive electron moving</p>

Q5.(2024)

B