

23 The ions formed when element X and element Y react together are shown.

- Element X forms X^- ions.
- Element Y forms Y^{2+} ions.

Which row identifies the position of X and of Y in the Periodic Table?

	X	Y
A	Group I	Group VI
B	Group VII	Group II
C	Group VII	Group VI
D	Group I	Group II

24 Which properties decrease down the group of alkali metals?

- 1 melting point
- 2 density
- 3 reactivity

A 1 and 2 **B** 1 only **C** 2 and 3 **D** 3 only

25 Some halide ions are displaced from aqueous potassium halides by halogens.

In which mixtures are the halide ions displaced?

- 1 potassium bromide and chlorine
- 2 potassium bromide and iodine
- 3 potassium iodide and chlorine
- 4 potassium chloride and iodine

A 1 and 3 **B** 1 and 4 **C** 2 and 3 **D** 2 and 4

23 Which statement about the elements in Group I is correct?

- A** Hydrogen is produced when Group I elements react with water.
- B** Ions of Group I elements have a 1– charge.
- C** Sodium is more reactive than potassium.
- D** Solid sodium is a poor electrical conductor.

24 Which row describes the colour and state of iodine at room temperature and pressure?

	colour	state
A	green	liquid
B	grey-black	solid
C	purple	solid
D	red-brown	liquid

25 Part of the Periodic Table is shown.

Which element is an inert gas?

A 10x4 grid representing a simplified periodic table. The grid is divided into four sections: A (top center), B (top right), C (bottom right), and D (bottom center). Section A is a 2x2 grid. Section B is a 2x2 grid. Section C is a 2x2 grid. Section D is a 2x2 grid. The grid is labeled with A, B, C, and D in the top right corner of each section.

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23 The Periodic Table shows the position of four different elements.

A simplified periodic table grid is shown. The grid consists of several rows and columns. The first row has a single box in the center. The second row has a box labeled 'A' in the first column and a box labeled 'B' in the eighth column. The third row has a box labeled 'C' in the second column and a box labeled 'D' in the tenth column. The fourth row has ten empty boxes. The fifth row has ten empty boxes.

Which row is correct?

	element	number of electrons in the outer shell
A	non-metal	1
B	metal	5
C	metal	2
D	non-metal	7

26 Which row identifies a transition element?

	melting point	density at r.t.p.
A	high	high
B	high	low
C	low	high
D	low	low

21 The properties of the elements change from left to right across the Periodic Table.

Which statement describes how the properties change across Period 3?

- A** Elements change from gases to solids.
- B** Elements change from non-conductors to electrical conductors.
- C** Elements change from metal to non-metal.
- D** Elements have a decreasing number of electron shells.

22 Which property decreases down Group VII of the Periodic Table, from chlorine to iodine?

- A** atomic number
- B** density
- C** reactivity
- D** melting point