

Periodic Table MCQS

- 5 The Group I metals lithium, sodium and potassium show trends in their melting points and in their reactions with water.

Which statement is correct going down the group from lithium to potassium?

- A Their melting points decrease and their reaction with water becomes less vigorous.
- B Their melting points decrease and their reaction with water becomes more vigorous.
- C Their melting points increase and their reaction with water becomes less vigorous.
- D Their melting points increase and their reaction with water becomes more vigorous.

- 6 From their position in the Periodic Table, which properties would you expect the elements vanadium, chromium and cobalt to have?

- 1 variable oxidation states
- 2 coloured compounds
- 3 high melting points

- A 1, 2 and 3 B 1 and 2 only C 1 and 3 only D 2 and 3 only

- 7 The table shows some information about elements in Group VII of the Periodic Table.

name	state at room temperature	colour
chlorine	gas	yellow-green
bromine	liquid	brown
iodine	?	?
astatine	solid	black

Which information about iodine completes the table?

	state	colour
A	liquid	black
B	liquid	green
C	solid	grey
D	solid	yellow

- 8 The diagram shows a section of the Periodic Table.

Which element is described below?

'A colourless, unreactive gas that is denser than air.'

				A
			B	
				C
				D

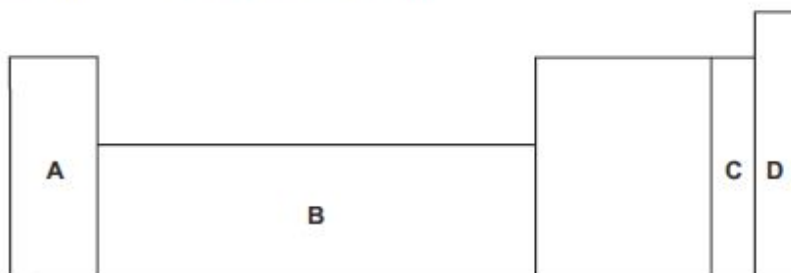
- 9 Which is **not** a characteristic property of transition metals?

- A act as catalysts
- B form coloured compounds
- C high melting point
- D low density

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- 10 An element does not conduct electricity and exists as diatomic molecules.

Where in the Periodic Table is the element found?



- 11 In the Periodic Table, how does the metallic character of the elements vary from left to right across a period?

- A It decreases.
- B It increases.
- C It increases then decreases.
- D It stays the same.

- 12 The elements in a group of the Periodic Table show the following trends.

- 1 The element with the lowest proton number has the lowest reactivity.
- 2 All the elements in the group form basic oxides.
- 3 The density of the elements increases down the group.
- 4 The melting point of the elements decreases down the group.

In which group are the elements found?

- A I B IV C VI D VII

- 13 Which element is a transition metal?

	melting point in °C	density in g/cm ³	colour of oxide
A	98	1.0	white
B	328	11.3	yellow
C	651	1.7	white
D	1240	7.4	black

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18 The Periodic Table lists all the known elements.

Elements are arranged in order of 1 number.

The melting points of Group I elements 2 down the group.

The melting points of Group VII elements 3 down the group.

Which words correctly complete gaps 1, 2 and 3?

	1	2	3
A	nucleon	decrease	increase
B	nucleon	increase	decrease
C	proton	decrease	increase
D	proton	increase	decrease

19 Which statements about Group I and Group VII elements are correct?

- 1 In Group I, lithium is more reactive than potassium.
- 2 In Group VII, chlorine is more reactive than fluorine.

	statement 1	statement 2
A	✓	✓
B	✓	✗
C	✗	✓
D	✗	✗

20 Which statement describes transition elements?

- A They have high densities and high melting points.
- B They have high densities and low melting points.
- C They have low densities and high melting points.
- D They have low densities and low melting points.

21 Which trend occurs across the period from sodium to argon?

- A a change from metal to non-metal
- B an increase in melting point
- C a more violent reaction with water
- D an increase in electrical conductivity

22 Why is argon used in lamps?

- A Argon forms molecules when electricity is passed through it.
- B Argon is inert and so does not react with the hot filament.
- C Argon is less dense than air.
- D Argon produces light when it burns.

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32 Which row shows the correct catalyst for each industrial process?

	manufacture of sulfuric acid	manufacture of ammonia	manufacture of margarine
A	nickel	iron	vanadium(V) oxide
B	nickel	vanadium(V) oxide	iron
C	vanadium(V) oxide	iron	nickel
D	vanadium(V) oxide	nickel	iron

33 Which statement about both the Group I and Group VII elements is correct?

- A They conduct electricity when molten.
- B They form covalent compounds when bonded to non-metals.
- C They exist as diatomic molecules.
- D When Group I elements combine with Group VII elements, ionic compounds form.

34 The elements helium, argon and neon are noble gases.

Which statement is correct?

- A All these elements have eight electrons in their outer shell.
- B Argon is used to react with impurities in the manufacture of steel.
- C Helium is used in balloons as it is more dense than air.
- D Neon is used in light bulbs to give an inert atmosphere.



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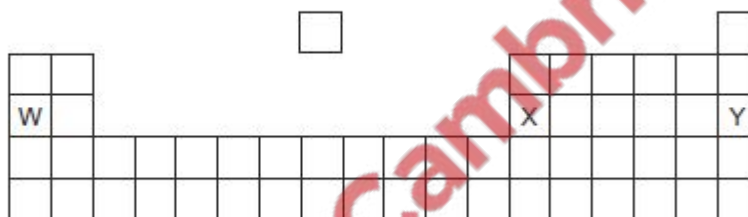
35 The table shows the proton numbers of four elements.

element	Q	R	T	Z
proton number	9	11	17	19

Which statement is correct?

- A Q is a metal.
- B Q is more reactive than T.
- C R is more reactive than Z.
- D T and Z are in the same period.

36 The diagram shows part of the Periodic Table.



Which row about the elements W, X and Y is correct?

	combines with oxygen in the ratio 2:3	exists as single atoms and is chemically unreactive	forms a carbonate which is not decomposed by heating in a Bunsen flame
A	W	X	Y
B	W	Y	X
C	X	W	Y
D	X	Y	W

37 Which pair gives two uses of argon?

- A disinfecting water and in balloons
- B disinfecting water and in light bulbs
- C in balloons and in the manufacture of steel
- D in light bulbs and in the manufacture of steel

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38 Element X forms an oxide of formula X_2O_5 .

In which group of the Periodic Table is X likely to be found?

- A Group II
- B Group III
- C Group V
- D Group VIII

39 Element M is a typical transition metal

Which property will it not have?

- A a low melting point
- B coloured compounds
- C good electrical conductivity
- D variable oxidation states

40 An atom of element E forms a white oxide of formula EO .

What is E?

- A argon
- B calcium
- C copper
- D potassium

41 A lump of element **X** can be cut by a knife.

During its reaction with water, **X** floats and melts.

What is **X**?

- A calcium
- B copper
- C magnesium
- D potassium

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- 42 Some properties which make elements different from each other are listed.
- 1 metallic character
 - 2 number of electron shells in an atom
 - 3 number of protons in an atom
 - 4 total number of electrons in an atom

Which two properties increase across a period of the Periodic Table?

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

- 43 Which row is a transition element?

	melting point/ $^{\circ}\text{C}$	density in g/cm^3
A	44	1.82
B	181	0.53
C	271	9.75
D	1244	7.20

- 44 Element Z combines with sodium to form the compound Na_2Z .

The positions of four elements are shown on the outline of part of the Periodic Table.

Which is element Z?

The diagram shows a partial periodic table with the following elements marked:

- A**: Group 1, Period 2
- B**: Group 17, Period 2
- C**: Group 16, Period 3
- D**: Group 16, Period 4

Element Z is located in the empty box at the top of the transition metal block, which is Group 10, Period 4.

- 45 From their position in the Periodic Table, which statement is correct?

- Atoms of elements in Group VII react to form ions by losing one electron.
- Iodine can displace bromine from its salts.
- Potassium reacts more rapidly than lithium with water to form the hydroxide and hydrogen.
- The melting point of caesium is greater than that of potassium.

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46 The table gives the melting points, densities and electrical conductivities of four elements.

Which element is copper?

	melting point in °C	density in g / cm ³	electrical conductivity
A	-38.9	13.6	good
B	-7.2	3.12	poor
C	97.8	0.97	good
D	1083	8.96	good

47 An atom of an element has eight electrons only.

Which statement about this element is correct?

- A** It forms an ion with two negative charges.
- B** It has a full outer shell of electrons.
- C** It is a metal.
- D** It is in Group VIII of the Periodic Table.

48 Which element described in the table is a transition metal?

	number of oxidation states	coloured compounds	melting point	density
A	one	no	high	low
B	two	no	low	high
C	two	yes	high	high
D	two	yes	low	low

49 Three different elements react by losing electrons. The ions formed all have the electronic configuration 2,8.

Which statement about these elements is correct?

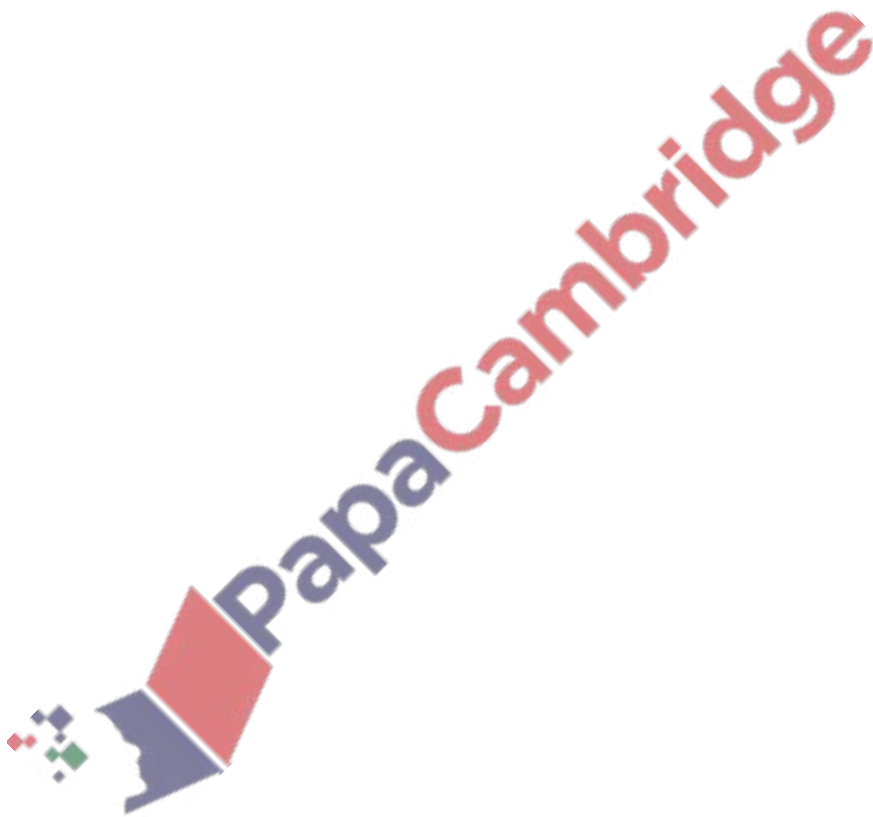
- A** They are in the same group.
- B** They are in the same period.
- C** They are noble gases.
- D** They are transition elements.

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- 50 The Periodic Table shows the positions of elements A, B, C and D. These are not the usual symbols of these elements.

Which element has a high melting point and can be used as a catalyst?

I		II										III	IV	V	VI	VII	0
A																	
B																	



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Marking Key

- | | |
|------|------|
| 1-A | 27-C |
| 2-D | 28-C |
| 3-A | 29-D |
| 4-D | 30-D |
| 5-B | 31-D |
| 6-A | 32-C |
| 7-C | 33-D |
| 8-D | 34-D |
| 9-D | 35-B |
| 10-C | 36-D |
| 11-A | 37-D |
| 12-A | 38-C |
| 13-D | 39-A |
| 14-C | 40-B |
| 15-B | 41-D |
| 16-C | 42-D |
| 17-D | 43-D |
| 18-C | 44-D |
| 19-D | 45-B |
| 20-A | 46-B |
| 21-A | 47-B |
| 22-B | 48-C |
| 23-B | 49-B |
| 24-C | 50-C |
| 25-A | |
| 26-D | |

