

# Periodic Trends

## Question Paper 1

Level	IGCSE
Subject	Chemistry (0620/0971)
Exam Board	Cambridge International Examinations (CIE)
Topic	The Periodic Table
Sub-Topic	Periodic Trends
Booklet	Question Paper 1

**Time Allowed:** 21 minutes

**Score:** /17

**Percentage:** /100

### Grade Boundaries:

9	8	7	6	5	4	3	2	1
>85%	75%	68%	60%	53%	48%	40%	33%	<25%

- 1 Calcium, on the left of Period 4 of the Periodic Table, is more metallic than bromine on the right of this period.

Why is this?

Calcium has

- A fewer electrons.
  - B fewer protons.
  - C fewer full shells of electrons.
  - D fewer outer shell electrons.
- 2 The diagram shows one period of the Periodic Table.

Li	Be	B	C	N	O	F	Ne
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Which two elements form acidic oxides?

- A carbon and lithium
  - B carbon and neon
  - C carbon and nitrogen
  - D nitrogen and neon
- 3 Which property of elements increases across a period of the Periodic Table?
- A metallic character
  - B number of electron shells
  - C number of outer shell electrons
  - D tendency to form positive ions

4 W, X, Y and Z are elements in the same period in the Periodic Table.

W and Y are metals. X and Z are non-metals.

Which shows the correct order of these elements across the period?

**A**

W		X		Y		Z	
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**B**

X	Z				W		Y
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**C**

Y					W	X	Z
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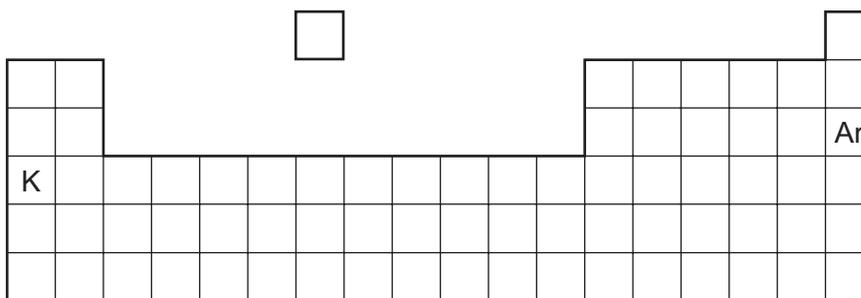
**D**

W		Y				X	Z
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5 Which property of elements increases across a period of the Periodic Table?

- A** metallic character
- B** number of electron shells
- C** number of outer shell electrons
- D** tendency to form positive ions

- 6 Argon, Ar, has a higher relative atomic mass than potassium, K, but appears before it in the Periodic Table.



Why is argon listed before potassium in the Periodic Table?

- A Argon has fewer neutrons than potassium.
  - B Argon has fewer protons than potassium.
  - C Argon has more neutrons than potassium.
  - D Argon has more protons than potassium.
- 7 J and K are two elements from the same period in the Periodic Table.

The table gives some properties of J and K.

	J	K
appearance	shiny grey	dull yellow
electrical conductivity when solid	good	poor
malleability	malleable	brittle

Which statement about J and K is correct?

- A J forms an acidic oxide.
- B J is found to the left of K in the Periodic Table.
- C K forms positive ions when it reacts.
- D K is more metallic than J.

8 In the outline of the Periodic Table below, some elements are shown as numbers.

												1	2			
3													4			
5	6															
													7			

Which two numbers are **metals** in the same period?

- A** 1 and 2      **B** 1 and 7      **C** 3 and 5      **D** 5 and 6

9 Where in the Periodic Table is the metallic character of the elements greatest?

	left or right side of a period	at the top or bottom of a group
<b>A</b>	left	bottom
<b>B</b>	left	top
<b>C</b>	right	bottom
<b>D</b>	right	top

10 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.



14 The elements in Group IV of the Periodic Table are shown.

carbon

silicon

germanium

tin

lead

flerovium

What does **not** occur in Group IV as it is descended?

- A The proton number of the elements increases.
- B The elements become more metallic.
- C The elements have more electrons in their outer shells.
- D The elements have more electron shells.

15 Which property of elements increases across a period of the Periodic Table?

- A metallic character
- B number of electron shells
- C number of outer shell electrons
- D tendency to form positive ions

16 Element Y has a nucleon number of 19 and a proton number of 9.

Which group in the Periodic Table does it belong to?

- A** I                      **B** III                      **C** VII                      **D** VIII

17 Sodium and rubidium are elements in Group I of the Periodic Table.

Which statement is correct?

- A** Sodium atoms have more electrons than rubidium atoms.  
**B** Sodium has a lower density than rubidium.  
**C** Sodium has a lower melting point than rubidium.  
**D** Sodium is more reactive than rubidium.