

### Exercise 3.26 – Summary questions on period 3 oxides and chlorides

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**Q326-01** Which of the following statements is/are correct

- I The melting points decrease from Li to Cs for the alkali metals
- II The melting points increase from F to I for the halogens
- III The melting points decrease from Na to Ar for the period 3 elements

- A. I, II and III
  - B. II and III only
  - C. I and III only
  - D. I and II only
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**Q326-02** Why do the boiling points of the halogens increase down the group?

- A. There is an increase in bond enthalpy
  - B. There is an increase in bond polarity
  - C. There is an increase in the strength of temporary dipoles
  - D. There is an increase in electronegativity
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**Q326-03** Which statement is correct for a periodic trend?

- A. Ionisation energy increases from Li to Cs
  - B. Melting point increases from Li to Cs
  - C. Ionisation energy increases from F to I
  - D. Melting point increases from F to I
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**Q326-04** Which properties are typical of most non-metals in period 3 (Na to Ar)

- I They form ions by gaining one or more electrons
- II They are poor conductors of heat and electricity
- III They have high melting points

- A. I and II only
  - B. I and III only
  - C. II and III only
  - D. I, II and III
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**Q326-05** Which property decreases down group 7 in the periodic table?

- A. Atomic radius
  - B. Electronegativity
  - C. Ionic radius
  - D. Melting point
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**Q326-06** Which of the physical properties below decrease with increasing atomic number for both alkali metals and the halogens?

- I Atomic radius
- II Ionisation energy
- III Melting point

- A. I and II only
  - B. I and III only
  - C. II only
  - D. I, II and III
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**Q326-07** Which of the following oxides is (are) gases at room temperature?

- I  $\text{SiO}_2$
- II  $\text{P}_4\text{O}_6$
- III  $\text{SO}_2$

- A. I only
  - B. III only
  - C. I and II only
  - D. II and III only
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**Q326-08** Which of the following properties of the halogens increase from F to I?

- I Atomic radius
- II Melting point
- III Electronegativity

- A. I only
  - B. I and II only
  - C. I and III only
  - D. I, II and III
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**Q326-09** Which property increases with increasing atomic number for both the alkali metals and the halogens?

- A. Atomic radius
  - B. Electronegativity
  - C. Ionisation energy
  - D. Melting point
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**Q326-10** At standard temperature and pressure (STP), chlorine is

- A. a white, unstable solid.
  - B. a brown liquid
  - C. a soft, reactive solid.
  - D. a green gas.
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