

### Exercise 3.35 – The oxides and chlorides of period 3

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**Q335-01** The compounds  $\text{Na}_2\text{O}$ ,  $\text{Al}_2\text{O}_3$  and  $\text{SO}_2$  respectively are:

- A. Acidic, amphoteric and basic
- B. Amphoteric, basic and acidic
- C. Basic, acidic and amphoteric
- D. Basic, amphoteric and acidic

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**Q335-02** The oxides of the elements of the third period ( $\text{Na} \longrightarrow \text{Cl}$ ) become more --- I -- and produce more – II -- solutions when added to water.

- |    | I        | II       |
|----|----------|----------|
| A. | ionic    | acidic   |
| B. | ionic    | alkaline |
| C. | covalent | acidic   |
| D. | covalent | alkaline |

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**Q335-03** When sodium oxide and sulphur dioxide are added to separate test tube containing water the solution will be, respectively:

- A. Acidic and acidic
- B. Acidic and basic
- C. Basic and acidic
- D. Basic and basic

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**Q335-04** Which reaction between an alkali metal and a halogen is the most vigorous?

- A. Lithium reacting with bromine
- B. Sodium reacting with chlorine
- C. Potassium reacting with bromine
- D. Potassium reacting with chlorine

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**Q335-05** Most of the oxides of non-metallic elements are:

- A. Ionic and basic
- B. Ionic and acidic
- C. Covalent and basic
- D. Covalent and acidic

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**Q335-06** Which set of reactants below is expected to produce the least vigorous reaction?

- A.  $\text{Na(s)} + \text{Cl}_2(\text{g})$
  - B.  $\text{Na(s)} + \text{Br}_2(\text{l})$
  - C.  $\text{K(s)} + \text{Cl}_2(\text{g})$
  - D.  $\text{K(s)} + \text{Br}_2(\text{g})$
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**Q335-07** A group 1 element, X, bonds with a group 7 element, Y. What is the most likely formula and type of bonding in this compound?

- A.  $X_2Y$  ionic
  - B. XY ionic
  - C. XY covalent
  - D.  $XY_2$  covalent
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**Q335-08** Which of the following chlorides gives neutral solution when added to water

I	NaCl
II	$Al_2Cl_6$
III	$PCl_3$

- A. I only
  - B. I and II only
  - C. II and III only
  - D. I, II and III
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**Q335-09** Which oxide is the most acidic?

- A.  $Al_2O_3$
  - B.  $SiO_2$
  - C.  $P_4O_{10}$
  - D.  $SO_3$
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**Q335-10** Which of the following elements burns readily in oxygen to form a solid acidic oxide?

- A. nitrogen.
  - B. phosphorus.
  - C. sodium.
  - D. carbon.
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