Practice Question Set For A-Level
Subject : Chemistry
Paper-1 Topic: Inorganic 2

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Name of the Student:_____
Max. Marks : 19 Marks **Time : 19 Minutes**

Mark Schemes

Q1.

(a) (i) Oxide 1 B **1**

Oxide 2 E **1**

Explanation Low melting point or weak van der Waals' forces between molecules **1**

(ii) Chemical test Add water or flame test **1**

Test pH or flame colour **1**

Observation pH = 13/14 or colour yellow **1**

(b) (i) Equation $CaCO_3 \rightarrow CaO + CO$ **1**

(ii) Product $CaSO_3$ **1**

(iii) Disposal of large quantities of $CaSO_3$ (allow $CaSO_4$) **1**

Produces CO_2 or uses up $CaCO_3$ **1**

[10]

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Q2.

(a) (i) *can form a solution with pH less than 3*: P_4O_{10} or SO_3 **(1)**

(ii) *can form a solution with with a pH greater than 12*: Na_2O **(1)**

penalise any wrong answer to zero

2

(b) (i) $MgO + 2HNO_3 \rightarrow Mg(NO_3)_2 + H_2O$ or an ionic equation **(1)**
i.e. $MgO + 2H^+ \rightarrow Mg^{2+} + H_2O$
not $O^{2-} + 2H^+ \rightarrow H_2O$

(ii) $2NaOH + SiO_2 \rightarrow Na_2SiO_3 + H_2O$ or ionic equation **(1)**
i.e. $SiO_2 + 2OH^- \rightarrow SiO_3^{2-} + H_2O$

(iii) $3Na_2O + 2H_3PO_4 \rightarrow 2Na_3PO_4 + 3H_2O$ etc or ionic equation **(1)**
i.e. $Na_2O + 2H^+ \rightarrow 2Na^+ + H_2O$

3

(c) P_4O_{10} is a molecular (structure) or simple covalent **(1)**
Weak intermolecular forces or van der Waals forces (between molecules) **(1)**
SiO_2 is a macromolecule / giant covalent / giant molecule **(1)**
Not giant lattice

(Strong) covalent bonds (between atoms) must be broken **(1)**

4

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