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

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Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Q1.

This question is about some Period 3 elements and their oxides.

(a) Describe what you would observe when, in the absence of air, magnesium is heated strongly with water vapour at temperatures above 373 K.
Write an equation for the reaction that occurs.

Observations _____

_____

_____

_____

_____

Equation _____

(3)

(b) Explain why magnesium has a higher melting point than sodium.

_____

_____

_____

_____

(2)

(c) State the structure of, and bonding in, silicon dioxide.
Other than a high melting point, give **two** physical properties of silicon dioxide that are characteristic of its structure and bonding.

Structure _____

Bonding _____

Physical property 1 _____

Physical property 2 _____

(4)

(d) Give the formula of the species in a sample of solid phosphorus(V) oxide.
State the structure of, and describe fully the bonding in, this oxide.

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Formula _____

Structure _____

Bonding _____

_____

_____

_____

(4)

(e) Sulfur(IV) oxide reacts with water to form a solution containing ions.

Write an equation for this reaction.

_____

(1)

(f) Write an equation for the reaction between the acidic oxide, phosphorus(V) oxide, and the basic oxide, magnesium oxide.

_____

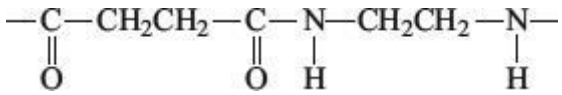
(1)

(Total 15 marks)

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Q2.

(a) The structure below shows the repeating unit of a polymer.



By considering the functional group formed during polymerisation, name this type of polymer and the type of polymerisation involved in its formation.

Type of polymer _____

Type of polymerisation _____

(2)

(b) Draw the structure of the species present in solid aminoethanoic acid, H_2NCH_2COOH

(1)

(c) Explain why the melting point of aminoethanoic acid is much higher than that of hydroxyethanoic acid, $HOCH_2COOH$

_____

_____

_____

(2)

(Total 5 marks)

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