

CHEMISTRY DEPARTMENT 2023**S5 TOPICAL TEST****INORGANIC CHEMISTRY****SUB TOPIC; PERIOD THREE**

Name **combn**.....

1. Sodium, magnesium, aluminium and silicon are some of elements of period 3.
Describe the reaction of those elements with

(a)air (06 marks)

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(b) Water (06 marks)

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2. Briefly describe the reaction of sulphuric acid with magnesium (03 marks)

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(ii) Write an equation for the reaction between dilute hydrofluoric acid and silicon

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3. Write an equation for the reaction between hot sodium hydroxide solution and
(a) aluminium oxide (1 ½ marks)

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(b) silicon dioxide (1 ½ marks)

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(c) silicon (1 ½ marks)

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(d) Aluminium

(1 ½ marks)

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(e) chlorine gas

(1 ½ marks)

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4. State the conditions and write equation under which elements react with chlorine
gas

(i) Sodium

(02 marks)

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(ii) Magnesium

(02 marks)

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(iii) Phosphorus

(02 marks)

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(iv) Sulphur

(02 marks)

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5. Write an equation for the reaction how the following oxides react with water

(i) Sodium oxide

(1½ marks)

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(ii) silicon dioxide

(1½ marks)

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(iii) phosphorus(v) oxide

(1½ marks)

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7. (a) Write the formula of the hydrides of sodium and phosphorous, in each case stating the type of bond present in the compound. (03 marks)

| Element | Formula of hydride | Type of Bond |
|-------------|--------------------|--------------|
| Sodium | | |
| Phosphorous | | |

(b) Write equation to show how hydride of sodium reacts with water (1½ marks)

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END.