**Week 1 HT homework name ………………………… class……………………**

**Q1.**  Complete the sentence by putting a cross (  ) in the box next to your answer.  The reaction for the extraction of aluminium from its ore involves

**(1)**

    **A**   heating with carbon

    **B**   thermal decomposition

    **C**   reduction

    **D**   neutralisation

**Q2.**

Calcium and potassium react with water in similar ways.

(i)  One similarity in the reactions is that hydrogen gas is produced. State **one** other similarity in the products of the reactions of calcium and potassium with water.

**(1)**

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(ii)  Potassium is higher in the reactivity series than calcium and reacts more   
       vigorously with water than calcium reacts with water.

State why potassium is higher in the reactivity series and reacts more   
vigorously with water than calcium.

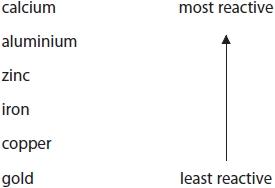
**(1)**

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**Q3.**Most metals are extracted from ores found in the Earth's crust. The method used to extract a metal from its ore is linked to the reactivity of the metal.

Part of the reactivity series is shown in Figure 2.



**Figure 2**

Iron ore contains iron oxide. Iron is extracted from iron oxide by heating the oxide with carbon.





(i)  In this reaction

**(1)**

   **A**    carbon is reduced

   **B**    iron oxide is neutralised

   **C**    iron oxide is reduced

   **D**    iron is oxidised

**Q4.** Iron is extracted from its ore by heating with carbon. Aluminium is extracted from its ore using a different method.

(i)  Give the name of the method used to extract aluminium.

**(1)**

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(ii)  Give the name of the method used to extract iron.

**(1)**

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(iii) Describe how silver is found. *Hint: when you see the command word ‘describe’, think, ‘say what you would see’.*

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**(2)**

**Q5.** Most metals are extracted from ores found in the Earth's crust. The method used to extract a metal from its ore is linked to the reactivity of the metal.

Predict the method that will have to be used to extract calcium from its ore.

**(1)**

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**Q6.** In recent years, researchers have been investigating alternative methods of extracting metals from soils. Researchers have found that growing certain plants in appropriate areas can result in the phytoextraction of copper.

Describe how growing plants can result in the phytoextraction of copper.

**(2)**

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*Hint: if you are struggling with Q6 google ‘BBC bite size biological methods of extracting metals’.*