

- (d) Copper can be extracted from low-grade ores by bioleaching.

Describe what is meant by bioleaching. **(HT only)**

(2)

(Total 9 marks)

Q2.

This question is about groups in the periodic table.

The elements in Group 1 become more reactive going down the group.

Rubidium is below potassium in Group 1.

- (a) Rubidium and potassium are added to water.

Predict **one** observation you would see that shows that rubidium is more reactive than potassium.

(1)

- (b) Explain why rubidium is more reactive than potassium.

(3)

- (c) Complete the equation for the reaction of rubidium with water.

You should balance the equation.



(3)

The noble gases are in Group 0.

(d) Which is a correct statement about the noble gases?

Tick (✓) **one** box.

The noble gases all have atoms with eight electrons in the outer shell.

The noble gases have boiling points that increase going down the group.

The noble gases have molecules with two atoms.

The noble gases react with metals to form ionic compounds.

(1)

(e) The table below shows information about the three isotopes of neon.

Mass number	Percentage abundance (%)
20	90.48
21	0.27
22	9.25

Calculate the relative atomic mass (A_r) of neon.

Give your answer to 3 significant figures.

Relative atomic mass (3 significant figures) = _____

(3)

(Total 11 marks)