

# Calculations involving Masses

## Question Paper 3

Level	Edexcel
Subject	Chemistry
Exam Board	GCSE(9-1)
Topic	Key Concepts in Chemistry
Sub Topic	Calculations involving Masses
Booklet	Question Paper 3

**Time Allowed:** 30 minutes

**Score:** /25

**Percentage:** /100

- 1 (a) Argon is an element in Group 0 of the periodic table.  
It is used as the gas in filament lamps.

Complete the sentence by putting a cross (☒) in the box next to your answer.

Argon is used in filament lamps because it

(1)

- A** has a low density
- B** is a good conductor of electricity
- C** is flammable
- D** is inert

- (b) Metals are malleable.

Explain, in terms of their structures, why metals are malleable.

(2)

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- (c) In an experiment, 3.1 g of phosphorus reacted with 24 g of bromine to form phosphorus bromide.

Calculate the empirical formula of the phosphorus bromide.

You must show your working.

(relative atomic masses: P = 31, Br = 80)

(3)

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empirical formula .....







(c) When iron wool is heated in bromine vapour, it reacts to form iron bromide.

(i) In an experiment, 5.60 g of iron reacted exactly with 24.0 g of bromine, Br<sub>2</sub>.

[relative atomic masses: Fe = 56.0, Br = 80.0]

Determine, using this information, the balanced equation for the reaction between iron and bromine.

You must show your working.

(4)

(ii) When iron reacts with bromine, bromide ions are formed.

Explain the type of reaction bromine atoms undergo when they are converted to bromide ions.

(2)

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**(Total for Question 2 = 13 marks)**