Qualification Accredited

Oxford Cambridge and RSA

GCSE (9-1)

Examiners' report

TWENTY FIRST CENTURY SCIENCE COMBINED SCIENCE B

J260
For first teaching in 2016

J260/03 Summer 2019 series

Version 1

Contents

Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates. The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report. A full copy of the question paper can be downloaded from OCR.

Paper 3 series overview

J260/03 is the written examination component for the Physics content of the 21st Century Combined Science B GCSE. It is the foundation examination for knowledge and understanding of chapters P1-P6 and includes some Ideas about Science and Practical Skills.

Candidates performed well on simple calculations (e.g. 2c, 3a, 5a, 5bii, 10c and 12b). However, candidates were less successful when recall of an equation was required (e.g.3b, 5b and 9b). In addition, many candidates were unable to deal with the units and unit conversions required by some calculations (e.g. 8biii).

There was evidence to suggest that many candidates were unfamiliar with the practical skills in Questions 2d and 12. This disadvantaged some candidates who were unable to provide the level of detail expected in their responses.

While there were some very good responses to questions that asked for the meaning of scientific words (e.g. 2a, 7a and 9a), however most candidates performed very poorly. These types of questions are common on a foundation paper and practice at writing meanings would clearly benefit many candidates.

There was no evidence that any time constraints had led to a candidate underperforming and scripts where there was no response to the final question also had large sections of the paper which had not been tackled

i	**OCR support**	A set of booklets based on the GCSE PAG activities has been developed. These booklets contain a basic set of 21 practical activities and homework/follow up activities covering all the practical skills in chapter BCP*: Practical skills. • Practical skills booklet - Teacher and Technician notes • Practical skills booklet - Student booklet • Practical skills booklet - Extensions booklet

Question 1 (a)

1 Nina is looking at a cliff. She shouts and listens to the echoes from the cliff.

(a) Describe what happens to the sound wave to make an echo.

Put a (ring) around the correct answer.

absorbed **amplified** **radiated** **reflected** **refracted**

[1]

This was question was answered well. The two most common misconceptions were choosing refracted or radiated.

Question 1 (b)

(b) Which two statements about sound waves are correct?

Tick (✓) **two** boxes.

A sound wave is a transverse wave. ☐

A wave transfers energy from one place to another. ☐

In air, sound waves travel at about 330 m/s. ☐

The number of waves per second is called the period of the wave. ☐

We hear sounds when the air travels to our ears carrying the sound. ☐

[2]

The majority of candidates knew that waves transfer energy however only a few candidates recalled the speed of sound in air as 300 m/s.

Question 2 (a)

2 Jack is investigating an electric current in a wire.

(a) What is an electric current?

.... **[1]**

This is a simple recall question about electric current (P3.1.1). Very few candidates successfully recalled that an electric current is a flow of charge. The most common error was to define an electric current as a 'flow of electricity'.

Question 2 (b)

(b) Complete these sentences about current in a wire.

Use words from the list.

You may use each word once, more than once, or not at all.

battery **complete circuit** **diode** **resistance** **switch**

A current passes through a wire when the wire is connected to a ....

A current will not pass unless there is a ....

[2]

Most candidates correctly identified the battery for one mark, and around half of the candidates also identified that a 'complete circuit' was needed for a current to pass. The most common error was to choose 'switch' in place of either' complete circuit' or 'battery'.

Question 2 (c)

(c) The current in the wire is 0.4A.

Calculate the electric charge that passes a given point in 30 s.

Use the equation: charge = current × time

Charge = ... C **[2]**

All candidates were good at simple calculations and most were awarded both marks for this question.

Question 2 (d)

(d) Jack thinks the current in the wire will produce a magnetic field.

Describe how Jack can use a magnetic compass to show that the current creates a magnetic field.

....

....

....

....

.... **[3]**

This wasn't answered well as many candidates did not consider that the compass needed to be placed near the wire. There were a lot of descriptions about magnets having a north and south pole and attraction and repulsion, but not related to the magnetic field around a wire. Some candidates had the idea that the needle of the compass moved but that it spun round and round as opposed to lining up with the magnetic field.

Exemplar 1

Jack can get a magnet and see if the wire will conduct to it or not. If it doesnt then that shows ~~the~~ ~~A~~ that there isnt a magnetic field. **[3]**

This illustrates the confusion of many candidates who clearly had not experienced this practical activity.

	AfL	This question links to P3.4.5, P3.4.6 and P.3.4.7 while this is not a required practical skills activity in chapter BCP8, carrying out the activity or doing a class demonstration is one way to cover P3.4.5 describe how to show that a current can create a magnetic effect. For both the practical skills in BCP8, and the other practical learning outcomes (like P3.4.5) candidate performance will be improved if they have experienced a supporting experiment to see exactly what happens.

Question 3 (a)

3 A minibus travels on a level road.

The mass of the minibus and passengers is 1800 kg.

(a) The minibus travels at a speed of 20 m/s.

Calculate the kinetic energy of the minibus with all of its passengers.

Use the equation: kinetic energy = 0.5 × mass × (speed)^2

Kinetic energy = ... J **[2]**

All candidates were good at simple calculations and answered the question well.

Question 3 (b)

(b) The minibus now travels faster. The driver then brakes to a stop.

The braking force is 9000 N and the braking distance is 90 m.

Calculate the work done in stopping the bus.

Assume there are no other forces involved.

Work done = ... J **[3]**

This question required the recall of an equation (work done = force x distance) for which there a mark was awarded. Very few candidates gave the equation although some gained this the mark by showing correct working or their final answer. A very common error was to divide the braking force by the braking distance (9000 ÷ 90).

Question 3 (c) (i)

(c) The table shows factors that affect the braking distance when the driver has to stop suddenly.

Speed (km/h)	Road conditions	Braking distance (m)
20	dry	40
20	wet	80
30	dry	90
30	wet	180

Complete these sentences to explain the effects of road conditions and speed on braking distance.

(i) When roads are wet, the braking distance ....

because ....

.... **[2]**

Most candidates generally answered this question well. The most common error was being too vague in their explanation, such as stating 'it was slippery' with no comparison with to dry road conditions.

Exemplar 2

(i) When roads are wet, the braking distance is 80m

because the roads are slippery so it would be harder to break. No grip. **[2]**

This candidate has correctly stated the stopping distance increases, but their explanation has made no comparison with the dry conditions. An appropriate candidate response that would have been sufficient is 'more slippery' rather than 'no grip'.

Question 3 (c) (ii)

(ii) When the minibus is travelling faster, the braking distance ....

because ....

.... **[2]**

Most candidates scored the first mark for 'increases'. However, very few candidates considered energy in their explanation, rather most candidates wrote about force or extra speed.

Question 4 (a)

4 The light we see is called visible radiation.

Visible radiation is part of the electromagnetic spectrum that is shown in the diagram.

radio waves	microwaves	....	visible radiation	....	X-rays	gamma rays

(a) Complete the blank spaces in the diagram by adding the **two** missing types of radiation.

[2]

This question was answered well by candidates. One mark was allowed for knowing ultraviolet and infrared known but writing them in the incorrect positions.

Question 4 (b)

(b) Complete the sentence about visible radiation.

Put a (ring) around the correct choice.

Our eyes can detect **most of the** / **a very small** / **a very large** range of frequencies in the electromagnetic spectrum.

[1]

This was answered correctly by most candidates.

Question 5 (a) (i)

5 **(a)** The table gives information about different battery powered toys.

Toy	Power input (W)	Potential difference (V)
Jumping dog	1.0	6.0
Talking doll	0.1	3.0
Car	1.5	4.8
Keyboard	0.2	4.5

(i) Which toy transfers the most energy each second?

Put a (ring) around the correct answer.

Car **Jumping dog** **Keyboard** **Talking doll**

[1]

The jumping dog caused some confusion with many candidates. Many candidates picked the jumping dog 'toy' as the most energetic activity and it is suspected that they did not look at the headings and data in the table.

Question 5 (a) (ii)

(ii) When the keyboard is used, 1.6 C of charge flows through the circuit components.

Calculate the energy transferred in the circuit.

Use the equation: energy transferred = charge × potential difference

Energy transferred = ... J **[3]**

As with most simple calculations in the examination this question was answered well by most candidates who then gained all three marks.

Question 5 (b)

(b) A battery powered robot needs a potential difference of 9 V and a current of 0.2 A.

Calculate the power input required by the robot.

Power input = ... W **[3]**

Over half of the candidates answered this question well and gained full marks. Candidates were required to recall an equation here, and a significant number of candidates used equations other than power = p.d. x current. . The most common error was using the equation power = p.d. ÷ current.

Question 6 (a)

6 A cheetah is the fastest land mammal. Cheetahs hunt gazelles.

(a) The cheetah has a maximum speed of 30 m/s.

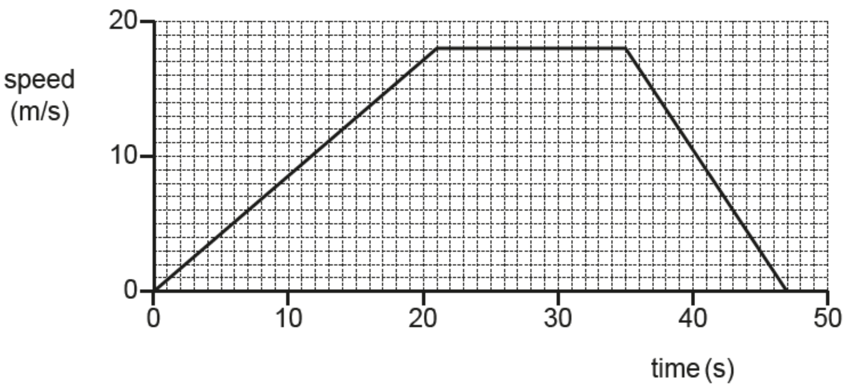
Calculate the time it will take to travel 120 m at maximum speed.

Time = ... s **[3]**

This was generally well answered with most candidates correctly recalling the required equation.

Question 6 (b)

(b) This is a speed-time graph of a gazelle which starts moving.



Describe the motion of the gazelle, using information from the speed-time graph.

....

....

....

....

....

.... **[3]**

This was generally answered well with good quantitative descriptions of the graph. However, some candidates were poor at reading the scales and gave incorrect times. Some candidates thought the graph was a distance-time graph and talked about the gazelle stopping.

Exemplar 3

the gazelle runs constantly and for 21seconds and hits a speed of 18(M/S) then has a 14 second rest then has a decrease in speed at reaches it's destination **[3]**

This response shows a candidate who has misread the axes and gets confused over whether this is a distance-time or speed-time graph.

Question 7 (a)

7 Some nuclei are radioactive and emit particles of radiation.

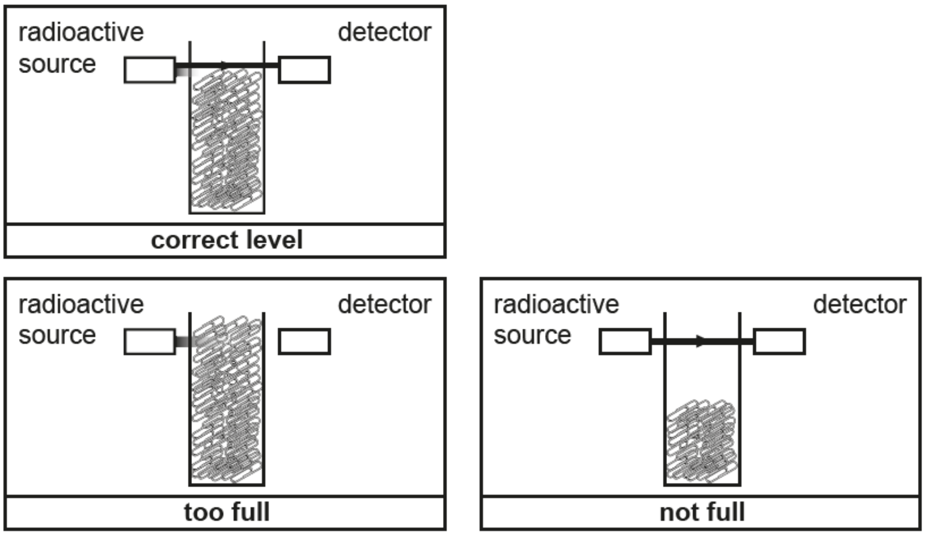
(a) Why are some nuclei radioactive?

.... **[1]**

This was a simple recall of a fact from the specification (P5.1.7 some nuclei are unstable and may emit alpha particles, beta particles, or neutrons, and electromagnetic radiation as gamma rays). To gain the mark candidates only needed to recall that some nuclei are 'unstable'.

Question 7 (b) (i)

(b) A radioactive source is used in a factory to check that cardboard packets of aluminium paper-clips are filled to the correct level. The diagram shows how this works.



(i) The radioactive source emits one type of radiation.

Put a (ring) around the correct choice to complete the sentence.

To check that cardboard packets of aluminium paper clips are full, the source must emit

alpha particles / beta particles / gamma rays.

[1]

This was answered correctly by most candidates who chose beta particles. Incorrect answers were fairly equally split between alpha and gamma.

Question 7 (b) (ii)

(ii) Explain why the type of radiation you chose in **(b)(i)** is the best choice to use in the factory.

....

....

....

.... **[2]**

Many candidates just talked about different penetrating strengths but did not relate their response to the question. Some wrote about alpha particles being stopped by paper but did not mention the cardboard or the paper clips. Some wrote about beta particles being stopped by aluminium, but did not mention the cardboard packet A few candidates wrote about the relative dangers of each type of radiation.

	AfL	In GCSE science examinations some questions will set familiar specification content in unfamiliar contexts. It is important that candidates are able to apply their knowledge and understanding in the situation presented to them.in the question.

Question 7 (b) (iii)

(iii) The radioactive source has a safety-shutter that is closed when it is not in use. This blocks the radiation.

Explain why the safety-shutter is needed.

....

....

.... **[2]**

Many candidates were given one mark for the idea of the radiation being dangerous, but very few gave enough detail to be credited with both marks. A common misconception was to talk about preventing radiation from 'getting out' or 'escaping'.

Question 7 (c) (i) and (ii)

(c) The nuclei of strontium-90 and uranium-234 are both radioactive.

Complete the decay equations for these two nuclei.

(i) Uranium-234 Thorium-230

$$^{234}_{92}\text{U} \rightarrow {}^{230}_{90}\text{Th} \quad {}^{\cdots\cdots}_{\cdots\cdots}\text{He}$$

[2]

(ii) Strontium-90 Yttrium-90

$$^{90}_{38}\text{Sr} \rightarrow {}^{90}_{39}\text{Y} + {}^{\cdots\cdots}_{\cdots\cdots}\text{e}$$

[2]

Many candidates were clear about how to derive the answers form the mass numbers and atomic numbers given in the equations. In part (i) some candidates added the mass numbers together and then the atomic numbers. In part (ii) the most common misconception was to give 1 for the atomic number of the beta particle rather than -1.

Question 8 (a)

8 **(a)** A student is given three metal bars that look identical, **AB**, **PQ**, and **XY**.

A B	P Q	X Y

She carries out some experiments to decide if each bar is a magnet or just an iron bar.

The table shows the results when the metal bars are tested against each other, to see if they attract or repel.

Arrangement of metal bars	Attract or Repel?
A B | P Q	attract
A B ... X Y	repel
A B | Q P	attract
B A | X Y	attract

Use the table to decide if each metal bar is a magnet or an iron bar.

Put **one** tick (✓) in each row.

Metal bar	Magnet	Iron bar
A B		
P Q		
X Y		

[1]

Around a third of candidates got this question correct. The most common misconception was not identifying that repulsion can only occur between two magnets.

Question 8 (b) (i)

(b) A strong magnet is used to lift a 220 g metal ball vertically into the air so that it hovers above the ground.

It stays in the same position without moving.

(i) What is the resultant force on the metal ball?

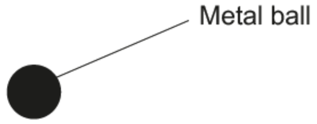
.... **[1]**

Very few candidates fully understood this question and gave the correct answer of zero. Most tried to name a force as the resultant force or just giving any number from the question. Some candidates named energy stores.

Question 8 (b) (ii)

(ii) The diagram shows the metal ball.

Draw and label the forces on the metal ball when it is hovering.



[3]

Very few candidates recognised that they were being asked to draw a free body diagram where the forces are balanced (P4.3.2). Many candidates did not include arrow heads for forces (which are vectors) or consider the lengths of arrows (which needed to be equal and opposite). Most students who drew a downward arrow labelled it gravity rather than weight / gravity force / mass x gravitational field strength.

?	**Misconception**	Many candidates appeared to be unfamiliar with free body diagrams and force arrows. Candidates drew arrows pointing in any direction, arrows that did not touch the ball and the lengths of arrows drawn that were not proportional to the forces they represented.

Question 8 (b) (iii)

(iii) Calculate the force on the 220g metal ball due to the magnet.

Gravitational field strength = 10 N/kg

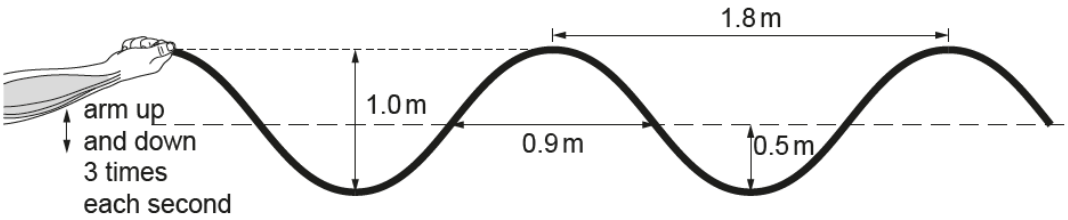
Force = ... N **[4]**

This proved one of the more challenging calculations in this examination as it required candidates to recall of an equation (weight = mass x gravitational field strength) and a unit conversion (from grams to kilograms). Over a third of candidates gained three of the marks but either did not attempt the unit conversion or did not calculate it correctly.

Question 9 (a)

9 Sarah exercises with a heavy rope. She moves her arm up and down making waves in the heavy rope.

The diagram shows her arm and the waves in the rope.



(a) Describe the wave motion of the rope, using the words **amplitude**, **wavelength** and **frequency**.

Use information from the diagram in your answer.

....

....

....

....

....

.... **[3]**

Few candidates got full marks here. This required the correct values to be given for wavelength, amplitude and frequency. Although wavelength was often given correctly by candidates then confused amplitude was often mistakenly given as 1.0 m (the wave height) rather than 0.5 m (the correct value for amplitude). Very few candidates could identify 3 Hz as the frequency. Lower ability candidates often referred to the size of the wave amplitude or wavelength changing.

Question 9 (b)

(b) The mass of **one metre** of the rope is 1.6 kg. The rope is 15 m long.

Calculate the weight of the rope.

Gravitational field strength = 10 N/kg

Weight = ... N **[4]**

This was generally done well with two thirds of candidates gaining some marks and nearly half gaining full marks. The most common error was to divide the mass of the rope by the gravitational field strength. Many candidates did not show any of their workings and may well have lost the mark for some of their method of calculating the mass of the rope as a consequence. All candidates should be encouraged to always show their working as candidates can gain marks for the correct steps in their method even when their final answer is incorrect.

Exemplar 4

Weight = ...24.................... N **[4]**

The candidate probably calculated 24 by multiplying mass of one metre of rope by the length of rope. Had the candidate written 1.6kg x 15m = 24 they would have gained one mark but because no workings were shown no credit could be given to the candidate. There needed to be some evidence of what the calculation meant.

Question 9 (c) (i), (ii) and (iii)

(c) Sarah finishes her exercises.

(i) Which energy store has decreased?

.... **[1]**

(ii) How was the energy transferred?

.... **[1]**

(iii) Which energy store has increased?

.... **[1]**

This question was not answered well. Candidates did not seem to know about the different energy stores. The chemical energy store was very rarely given in part (i). Kinetic energy or 'via the wave' was occasionally seen for part (ii). Only a few candidates wrote about the thermal energy store for part (iii). Many candidates rephrased selected words taken from the stem of the question, for example 'frequency, wavelength and amplitude.'

Question 9 (d)

(d) Kai uses a different rope.

He makes waves with a wavelength of 1.5 m and frequency of 2.2 Hz.

Calculate the wave speed in the rope.

Wave speed = ... m/s **[3]**

Most candidates were familiar with the wave equation and the question was answered well.

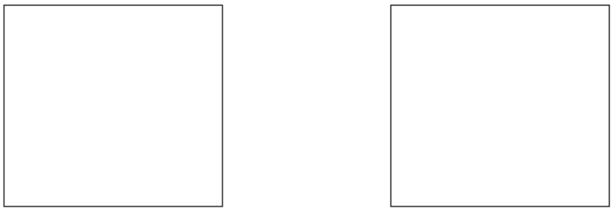
Question 10 (a)

10 Jane has 300 g of water in her water bottle. She adds 50 g of ice and puts the lid on. The total mass is now 350 g, excluding the mass of the water bottle.

(a) Explain the difference in the way the particles are arranged **and** the way they behave, in ice and water.

Complete the diagrams to help you explain the difference.

Use ideas from the particle model in your answer.



Particles in ice Particles in water

....

....

....

....

....

.... **[4]**

Candidates generally drew a good particle diagram for ice. However, the particle diagrams for water were less well drawn and many looked more like a particle diagram for a gas. These diagrams showed lots of space between particles, rather than the particles touching but with no organised structure. Most candidates only the movement of particles, often correctly for ice, but for water the descriptions were for gas rather than a liquid. Very few candidates compared changes in energy or attractive forces between particles in ice and water.

Question 10 (b)

(b) After 20 minutes there is no ice in the bottle.

Describe what has happened to the particles **and** why the mass is still 350 g.

Use ideas from the particle model in your answer.

....

....

.... **[2]**

About a fifth of candidates gained some marks for this question. Many candidates attempted to explain why there was no mass change, but made no reference to particles simply stating that ice melted to become water. Very few candidates mentioned energy changes with most candidates ignoring the first part of the question.

Question 10 (c)

(c) Calculate the energy needed to melt the 50 g of ice.

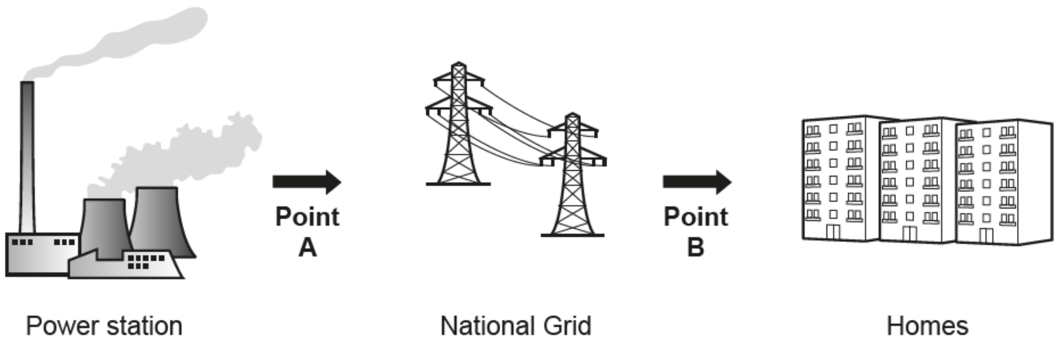
The specific latent heat of ice = 334 J/g

Energy = ... J **[2]**

Many candidates successfully identified the equation required from the data sheet and generally performed well on the question.

Question 11 (a)

11 Electrical power is transferred from power stations to homes by the National Grid, as shown in the diagram.



(a) In the National Grid, what is the name of the devices that change the voltage?

.... **[1]**

This was answered correctly by many candidates. When a candidate did not know the answer, they would often pick something from the diagram, e.g. Power station, Pylon.

Question 11 (b)

(b) Complete the sentences about the diagram. Use words from the list.

You may use each word once, more than once, or not at all.

decreased **increased** **unchanged**

At **Point A**, the potential difference (voltage) is ....

At **Point B**, the potential difference (voltage) is ....

[1]

Most candidates who correctly identified transformers in part (a) of the question gave a correct response here. Candidates who did not answer part (a) correctly also struggled with part (b).

Question 11 (c) (i)

(c) Appliances can be connected to the mains electricity supply in homes using 3-pin plugs.

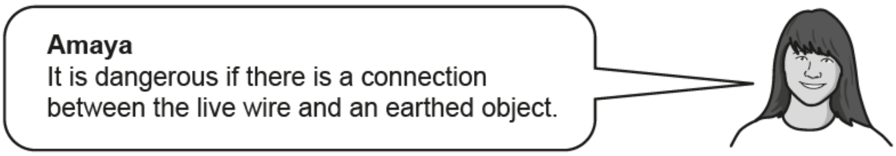
(i) What is the potential difference (voltage) of the mains electricity in a home?

Potential difference (voltage) = ... V **[1]**

This was a straightforward recall question and refers to P2.2.4, however few candidates knew domestic supply in the UK is 230 V. Many candidates appeared to write any number rather than a value close to or within the expected range (220–240 V).

Question 11 (c) (ii)

(ii) Amaya thinks of a hazard with using mains electricity.



Explain why Amaya is correct.

....

....

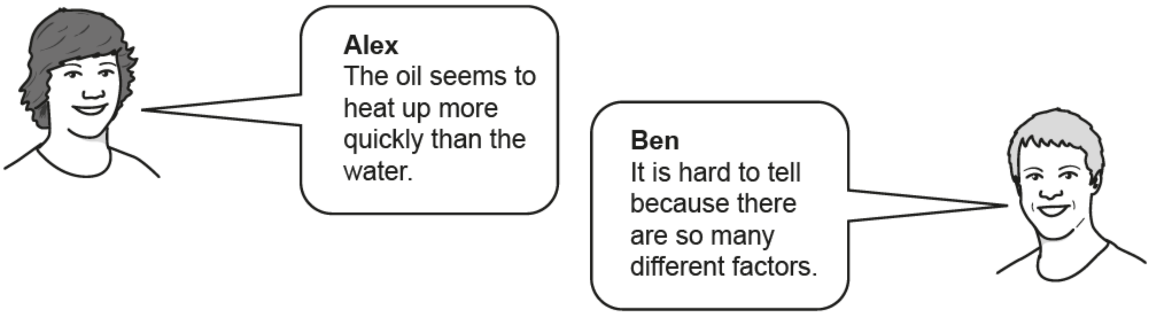
....

.... **[2]**

Very few candidates knew why the mains voltage was hazardous (i.e. large currents or alternating current), but many knew the consequences in terms of electrocution and fires.

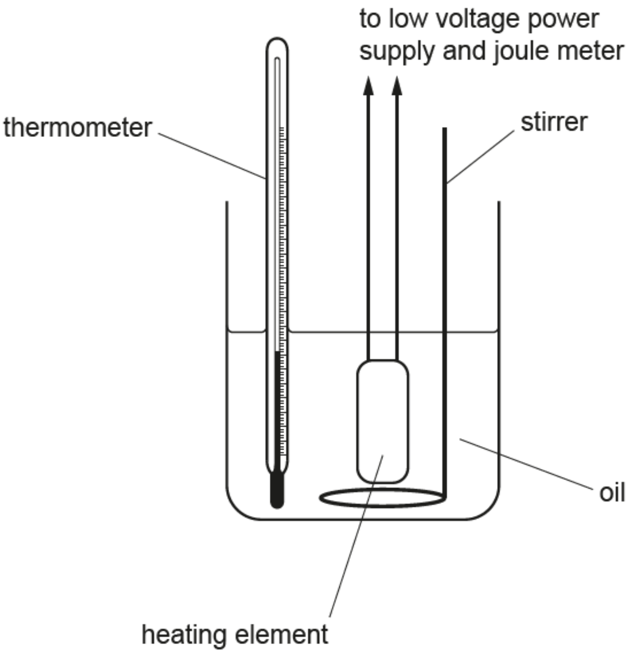
Question 12 (a)

12 Alex is frying potatoes in oil. Ben is boiling potatoes in water.



Their teacher suggests they compare the specific heat capacities of oil and water.

Alex and Ben set up the apparatus shown in this diagram to measure the specific heat capacity of the **oil**.



(a) Explain how they can safely use the apparatus, to take measurements, and to determine the specific heat capacity of the oil.

....

....

....

....

.... **[3]**

Candidates found this overlap question very challenging and only a third of them gained some credit for their answers. Most candidates focused on the safety aspects, often with limited detail and using goggles was the most common correct safety procedure stated. Several candidates suggested wearing 'gloves' but without saying they needed to be heatproof and so they could not gain a mark. Very few candidates attempted the measurements part of the question and those that did appeared unfamiliar with the required practical skills from PAG P5. All candidates will have experienced a practical activity involving measuring the specific heat capacity of a material, probably either a metal bock (PAG 5.1) or a volume of water (PAG5.2). It is important for candidates to be able to apply their experience of relevant practical work, such as 'measuring energy changes/transfers and associated values such as work done.'

Question 12 (b)

(b) Alex and Ben repeat their experiment 3 times. Their results are shown in **Table 12.1**.

Specific heat capacity of oil (kJ/kg °C)	**Experiment 1**	**Experiment 2**	**Experiment 3**
	1.94	2.23	1.98

Table 12.1

Calculate the mean specific heat capacity of the oil, using all the data in **Table 12.1**.

Mean specific heat capacity = ... kJ/kg °C **[2]**

Nearly all candidates completed this question well and calculated the correct answer. A compensatory mark was allowed to the small number of candidates who mistakenly removed the result from experiment 2, without any evidence that it was an outlier, and then calculated the mean as 1.96. IaS2 states that a result that appears to be an outlier should be treated as data, unless there is a reason to reject it.

i	**OCR support**	The Mathematical Skills Handbook provides both teachers and students support on the use of mathematical skills in GCSE Physics and other sciences.

Question 12 (c)

(c) **Table 12.2** shows accurate values for the specific heat capacities of the oil and water.

Liquid	Specific heat capacity (kJ/kg °C)
oil	1.7
water	4.2

Table 12.2

Compare the accurate value for the oil with Alex and Ben's calculated value in **(b)**.

Suggest a reason for the difference, and suggest how they could improve their experiment to get a more accurate result.

....

....

....

....

....

.... **[3]**

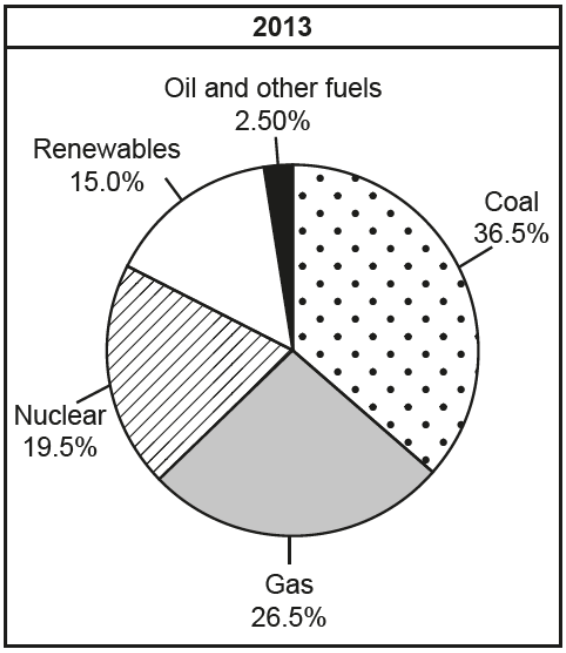
Very few candidates recognised that the problem with the Alex and Ben's method was heat loss and the solution was to insulate their apparatus. A few candidates did note that the results of Alex and Ben were too high. Few candidates attempted to apply their experience of the practical activities in the science classroom (PASG 5) to answer this question, but most just suggested vague mistakes made by Alex and Ben. A common misconception was suggesting that repeating the experiment more times would improve the accuracy of the result; on their own repeats may improve the precision of a set of results, but will have no effect on the accuracy of a single result.

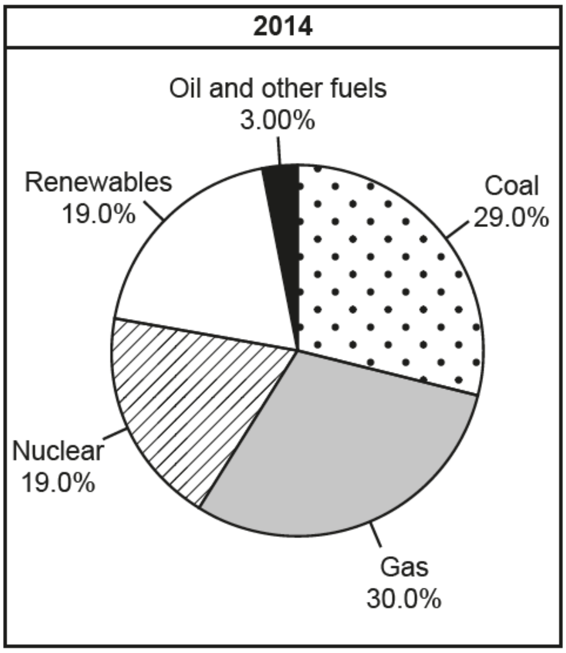
	AfL	Candidates can benefit from spending time considering the procedures and possible flaws in experimental design. Changing one thing in an activity that candidates have experienced (e.g. measuring the specific heat capacity of a metal block rather than a beaker of water) will grow the candidates' problem-solving skills and confidence.

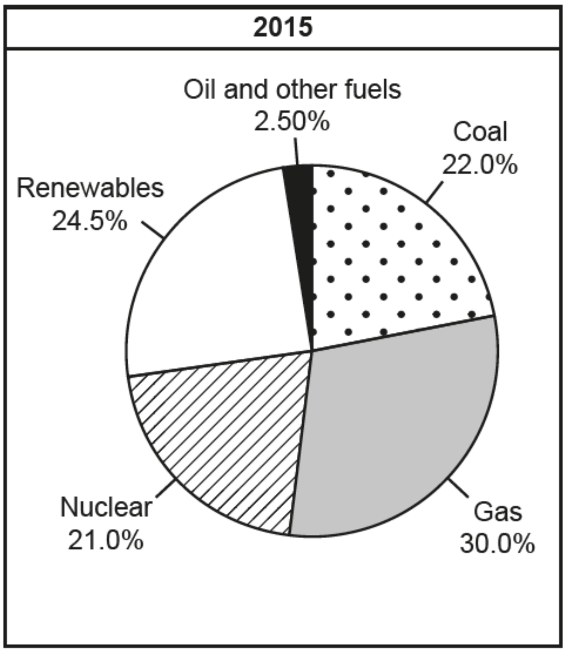
	OCR support	A Glossary of terms written in student accessible language has been produced to help students understand many of the specific scientific terms (such as accurate and precise) that have different meanings in common speech.

Question 13

13* These pie charts show the energy resources used to generate electricity in the UK in **2013**, **2014**, and **2015**.







Describe in detail how the energy resources used to generate electricity in the UK have changed from 2013 to 2015.

Suggest reasons for these trends.

Use information from the pie charts to support your answer.

....

....

....

....

....

.... **[6]**

Nearly all candidates attempted this overlap question and the majority gained some credit in the middle mark range. Many foundation tier candidates simply wrote down the data shown in the pie charts without identifying trends (for example calculating the change in percentages contribution of coal). Specific reasons for changes in energy resources were rarely given and were often not clearly linked to external factors like environmental policy. The candidates who used comparative language were able to reach the top of Level 2.

Exemplar 5

well from 2013-2015 there has been a decrease in coal, increase in renewables, increase in nuclear and decrease in oil and other fuels ~~which~~ these dessisions has helped the way for generating Electric in the Uk way More effizent and better.

This candidate has simply described the trends seen in the pie charts there is no attempt to develop the data by saying how much of an increase or decrease there is. The comment on why the changes have taken place is very vague (way more efficient and better) but makes no reference to environmental issues. The scientific content matches Level 1, and as there is an attempt at a logical structure the candidate was given 2 marks.

i	**OCR support**	The How to answer 6 mark LOR questions resource has been produced to help candidates and teachers unpick how best to tackle level of response questions. This resource has been recently revised with additional example questions and candidate responses from June 2018.

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