Qualification Accredited

Oxford Cambridge and RSA

GCSE (9-1)

Examiners' report

TWENTY FIRST CENTURY SCIENCE COMBINED SCIENCE B

J[redacted]60
For first teaching in 2016

J260/08 Summer 2018 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.

3-3 grade

Like all exam boards, we have awarded a 'safety net' grade of 3-3 for higher tier GCSE Combined Science candidates in 2018 where appropriate so that they are not disadvantaged by being the first to sit a new GCSE. To help teachers making difficult decisions about higher versus foundation tiers in 2019, OCR will be providing further guidance and extra webinars during the Autumn term.

Paper J260/08 series overview

This is a new paper with different style questions to that which candidates have encountered in previous examinations. Candidates engaged well with the paper. The timing seemed appeared appropriate. A number of practical skills including graph drawing were assessed in this paper.

Question 1 (a)

1 Parkinson's disease is a condition that affects the nervous system. There is currently no cure for the disease.

(a) It is estimated that 145 000 people will have Parkinson's disease in 2018.

It is predicted that by 2025 the number of people with Parkinson's disease will rise by $\frac{1}{5}$.

Calculate how many more people will have Parkinson's disease in 2025 than in 2018.

Number of people = ... **[2]**

The workings for this calculation were clearly shown. The problem was that candidates couldn't isolate just the rise in numbers but instead quoted the rise plus the original value as their final answer. The original value of 145,000 was not subtracted from the 174,000 they calculated to give 29,000. A final answer of 174,000 was often seen.

Question 1 (b)

(b) Scientists have observed that smoking affects people's risk of developing the disease.

The scientists investigated three groups of patients with Parkinson's disease.

A total of 1808 patients were studied.

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Discuss the findings of the study.

....

....

....

.... **[2]**

The expectation from the question set was that candidates would discuss the risk factor relating to smoking and Parkinson's disease and look at the percentages or at least look to process the data in some way.

Higher ability candidates could discuss the 'risk' but few went on to process the data to give a numerical description of the risk factors involved such as a percentage. Many candidates found it challenging to communicate their ideas using 'lower chance' or 'least likely' instead of using the word 'risk'.

It would have seemed strange to the candidates that the question discussed the idea of smoking reducing a risk as we have taught them all their lives that smoking is bad for you. This unusual circumstance seemed to confuse them. Candidates need to get used to applying their skills and knowledge to such unusual situation.

Candidates should also be encouraged to go beyond the simply repeating the data presented in the question. Centres should look to enable candidates the skills to process the data further when asked to describe what the data shows.

Question 1 (c) (i)

(c) One hypothesis states that nicotine in cigarettes may protect against Parkinson's disease.

People use e-cigarettes because they may be a less harmful source of nicotine.

Pure nicotine is a liquid at room temperature.

Fig. 1.1 is a simplified diagram showing how an e-cigarette works.

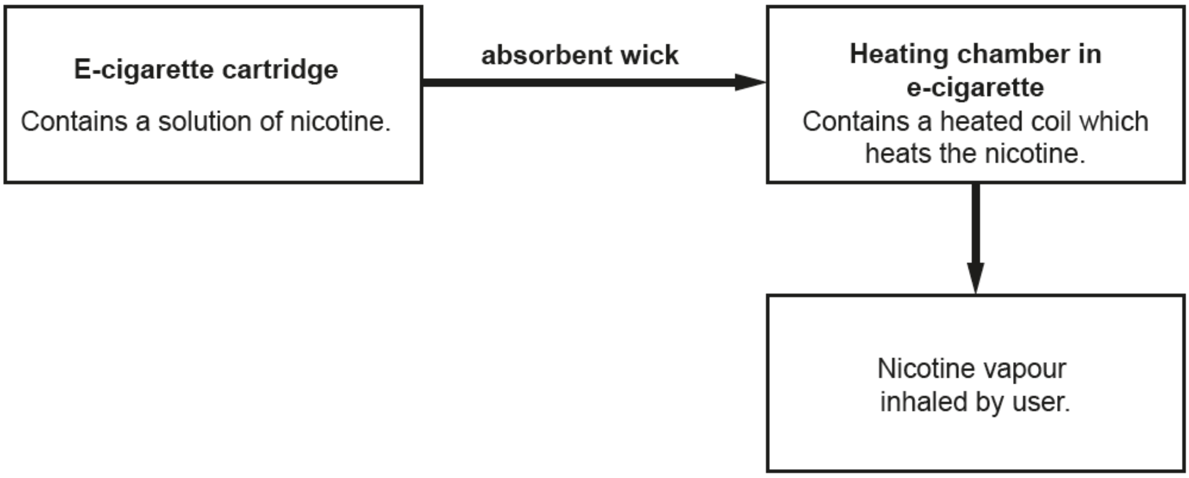

Fig. 1.1

(i) Describe what happens to nicotine **particles** in the heating chamber in an e-cigarette.

....

....

.... **[2]**

The wording of this question tried to direct candidates to discuss the movement of particles. This helped lower ability candidates as many were credited at least one of the two marks available. The whole range of expected responses was seen.

Question 1 (c) (ii)

(ii) Compare the changes that occur in an e-cigarette with those in a cigarette that burns tobacco.

....

....

.... **[1]**

Only higher ability candidates could communicate that a physical change of state took place in the e-cig compared to a chemical change with the formation of a new product in the cigarette. Centres need to coach candidates to make a comment about both sides of an argument, or in this case, types of cigarette to gain credit where the command word is 'compare'.

Question 1 (d) (i)

(d) Some students are talking about using e-cigarettes to reduce the risk of Parkinson's disease.

Ali
Is it the nicotine that's involved in protection against Parkinson's disease, or some other factor?

Kai
Nicotine raises heart rate and blood pressure. It also increases the risk of cardiovascular disease.

Layla
Nicotine is very addictive and should be avoided, whether it's in tobacco cigarettes or e-cigarettes.

Sarah
Scientists have found that nicotine affects levels of a chemical transmitter molecule between neurons in the brain.

(i) Which student is discussing the idea of correlation and cause?

Tick (✓) **one** box.

Ali ☐
Kai ☐
Layla ☐
Sarah ☐

[1]

Only a small number of candidates could identify Ali as describing an idea of correlation and cause.

Question 1 (d) (ii)

(ii) Which student has suggested a possible mechanism for the action of nicotine?

Tick (✓) **one** box.

Ali ☐
Kai ☐
Layla ☐
Sarah ☐

[1]

A large number of candidates identified Sarah as the person suggesting a possible mechanism for the action of nicotine.

Question 1 (e)

(e)* Food plants in the same family as tobacco also contain nicotine.

Scientists have studied how eating these foods affects the numbers of people with Parkinson's disease.

People with Parkinson's disease answered a questionnaire about their diet.

Scientists assessed the risk of developing Parkinson's disease in people that ate plant foods containing nicotine. The results are shown in **Table 1.1**.

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Table 1.1

*This is the person's risk compared with patients who ate foods containing no nicotine.

For example:

- if the risk is 2.00, you are twice as likely to get the disease
- if the risk is 0.50, you are half as likely to get the disease.

Use the information to determine if there is a correlation between eating plant foods with different concentrations of nicotine and the risk of developing Parkinson's disease.

Use the date in **Table 1.1** to support your answer.

....

....

....

.... **[6]**

This question was accessible to candidates of all abilities and many processed data well. Some candidates described the data as showing no correlation, correctly identifying that for most foods, as the concentration of nicotine increased in the food, the risk of developing Parkinson's disease lowered. They described the fact that tomato juice had a nicotine concentration higher than that of potatoes but actually had a higher risk rather than a lower risk. Other candidates correctly stated that for most of the foods there was indeed a correlation, but then referred to tomato juice as an 'outlier' and chose to discard this data. Centres should ensure candidates are aware that the outlier should be treated as data unless there is a reason to reject it such as a measurement or recording error. In this situation the candidates were not given any reason to discard the result and therefore it should be retained. Some candidates expressed good ideas about why the tomato juice result did not fit the trend.

Exemplar 1 is a higher ability candidate that has chosen to describe the data as a correlation. They have used the data in their response and have described the fact that tomato juice doesn't fit the pattern. They have also suggested there could be other factors that may influence the data. This show a comprehensive discussion of the data and a decision based on the data as they have interpreted it.

Exemplar 2 is a medium ability candidate that has chosen to describe the data as not having a correlation. They have used the data in their response explaining that the tomato juice shows there is no correlation. The discussion is comprehensive and logical and leads to a sensible discussion based on the data as they have correctly interpreted it.

Exemplar 1

there is 7

Use the information to determine if there is a correlation between eating plant foods with different concentrations of nicotine and the risk of developing Parkinson's disease.

Use the date in **Table 1.1** to support your answer.

L3

There is a negative correlation between the likelihood of developing Parkinson's disease and the concentration of nicotine in the food. Those consuming potatoes with 19 µg nicotine/kg are 92% as likely to ~~to of~~ develop(ing) Parkinson's disease. ~~as~~ Those who consume peppers, with a higher concentration of nicotine at ~~102~~ 102 µg/kg are less likely to develop Parkinson's disease at 24%, as compared with both those who consume potato, and those who consume no nicotine at all. Tomato juice is an outlier and does not correspond with the data; this suggests that there may be other factors which affect the high risk of developing Parkinson's from consuming it. [6]

Exemplar 2

no	0	1.00
potatoes	19	0.92
tomatojuice	30	2.16
Tomatoes	44	0.58
peppers	102	0.24

there is ~~a~~ some no correlation between plant foods containing nicotine and level of risk of developing parkinson's disease. ~~However~~ if you look at the foods containing no nicotine, there is still a risk of developing parkinson's which could suggest that nicotine is not an impacting factor. Notice how Peppers have the highest concentration of 102, but they also have the lowest risk of developing parkinsons, **[6]** 0.76 less than foods containing no nicotine. Therefore you could conclude that the higher the concentration, the lower the risk. But by looking through the rest of the data, this is simply not true. Tomato juice has the third lowest concentration but also the highest risk. Because of this uncorrelated data, it's safe to say concentration of nicotine does not ~~increas~~ directly affect risk of parkinsons disease.

Question 2 (a) (i)

2 Alex and Beth are investigating reaction time.

Alex drops a 30 cm ruler. Beth catches the ruler between her thumb and fingers as shown in **Fig. 2.1**.

The distance the ruler fell before being caught is recorded.

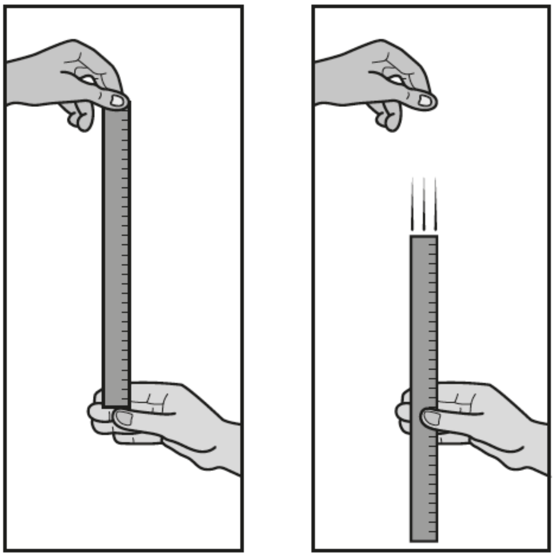


Fig. 2.1

(a) The students' results are shown in **Table 2.1**.

Trial	Distance the ruler dropped before being caught (mm)
1	115
2	113
3	109
4	111
5	112
6	107
7	109
8	108
9	109
10	108

Table 2.1

(i) Calculate the mean distance the ruler dropped.

Mean distance = ... mm **[1]**

This question was very well answered by all candidates.

Question 2 (a) (ii)

(ii) The time taken to catch the ruler, and therefore the person's reaction time, can be calculated using the following formula:

$$t = \sqrt{\frac{2d}{a}}$$

t = time in seconds
d = mean distance in metres
a = acceleration as a result of gravity = 9.81 m/s^2

Use your answer to **(a)(i)**. Calculate the mean reaction time in milliseconds.

Give your answer to **3** significant figures.

Mean reaction time = ...ms **[5]**

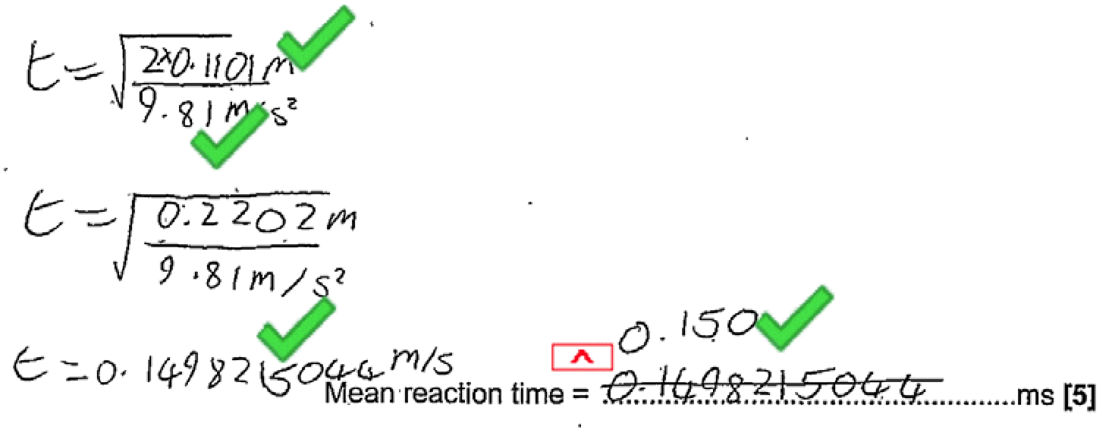
Few candidates appreciated the need to convert from mm to m from their response given in Q2ai and then a further conversion was required to express their final answer in ms rather than s.

Centres should spend time working on conversions and use examination material which help draw the attention of the candidates to these aspects, especially where the unit is provided on the answer line and given in the stem of the question.

Some candidates did not write their answer to the stated required number of significant figures. Centres should practice this skill with a variety of numbers to ensure candidates fully understand what is being asked of them.

Exemplar 3 shows a high ability candidate that has correctly converted mm to m and substituted the numbers into the equation correctly. The have evaluated their answer correctly but did not carry out the conversion from s to ms. They did however correctly round their answer to 3 significant figures and so were credited with 4 out of the possible 5 marks.

Exemplar 3



Question 2 (b)

(b) Receptors in the eye detect the stimulus that results in the ruler being caught.

Use your knowledge of the nervous system to describe this sequence of events.

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....

....

.... **[4]**

A number of candidates were successfully credited full marks on this question by demonstrating a sound knowledge of the processes involved in the nerve pathway. Some candidates did not get the neurons in the correct order and some referred to the spinal cord as the spine. Centres should encourage candidates to be clear in their descriptions of the spinal cord.

Centres should also be aware that candidates who repeat the information in the stem of the question will not gain credit. In this case a number of candidates repeated the information that 'receptors in the eye detect the stimulus which results in the ruler being caught'.

Question 3 (a)

3 The majority of the world's alcohol, 93%, is produced by the traditional method of fermentation of glucose with yeast.

Nina is investigating alcohol (ethanol) production as a sample of beer is brewed.

(a) Fermentation of glucose with yeast can be represented by an equation.

Balance the chemical equation for the reaction.

glucose → ethanol + carbon dioxide

$C_6H_{12}O_6$ (aq) → .... C_2H_5OH (aq) + ... CO_2 (g)

[1]

A large number of candidates successfully balanced this equation and were credited this mark.

Question 3 (b) (i)

(b) Nina's class investigates the rate of the reaction.

To do this, groups of students:

- measure the volume of ethanol produced over a period of time
- measure the rate of carbon dioxide production.

(i) Suggest **one other** physical method for determining the rate of chemical reactions.

.... **[1]**

Only a small number of candidates were credited this mark. Several gave biological based answers such as 'use a potometer' or answers that were not possible such as 'see how much glucose is used up', without giving details of how his would be accomplished. The question directed the candidates to discuss a chemical reaction and so expected answers were chemical based such as change in temperature, mass or measuring the volume of a gas etc. Centres should encourage candidates to read the questions carefully and be aware of the change in focus of the questions from biology, to chemistry and physics.

Question 3 (b) (ii)

(ii) Nina plots the graph in **Fig. 3.1** to show the volume of ethanol produced over a period of time when yeast are added to glucose.

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Fig. 3.1

Draw a tangent on the graph in **Fig. 3.1** to help you calculate the rate of reaction after 120 hours.

Rate = ... cm^3/h **[5]**

Several candidates struggled to draw a tangent. This is a skill centres need to work on with candidates. Some drew that tangent before the allotted 120 hours but most that were actually drawn were creditworthy.

The tangent was needed to provide data for the subsequent calculation. Some candidates did take the values for 120 hours and correctly used the data and the equation provided to calculate the rate of reaction **at** rather than **after** 120 hours. The correct use of the equation and evaluation was credited.

Exemplar 4 show a suitable tangent and a well laid out calculation that is easy to follow.

Exemplar 4

Draw a tangent on the graph in **Fig. 3.1** to help you calculate the rate of reaction after 120 hours.

50 ÷ 10 = 5 - up in 5

$\frac{\text{change in } y}{\text{change in } x} = \frac{y2 - y1}{x2 - x1} = \frac{55 - 43}{145 - 100} = 0.2\dot{6} \approx 0.27 \text{ cm}^3/\text{h}$

Rate = ...0.27...... cm^3/h **[5]**

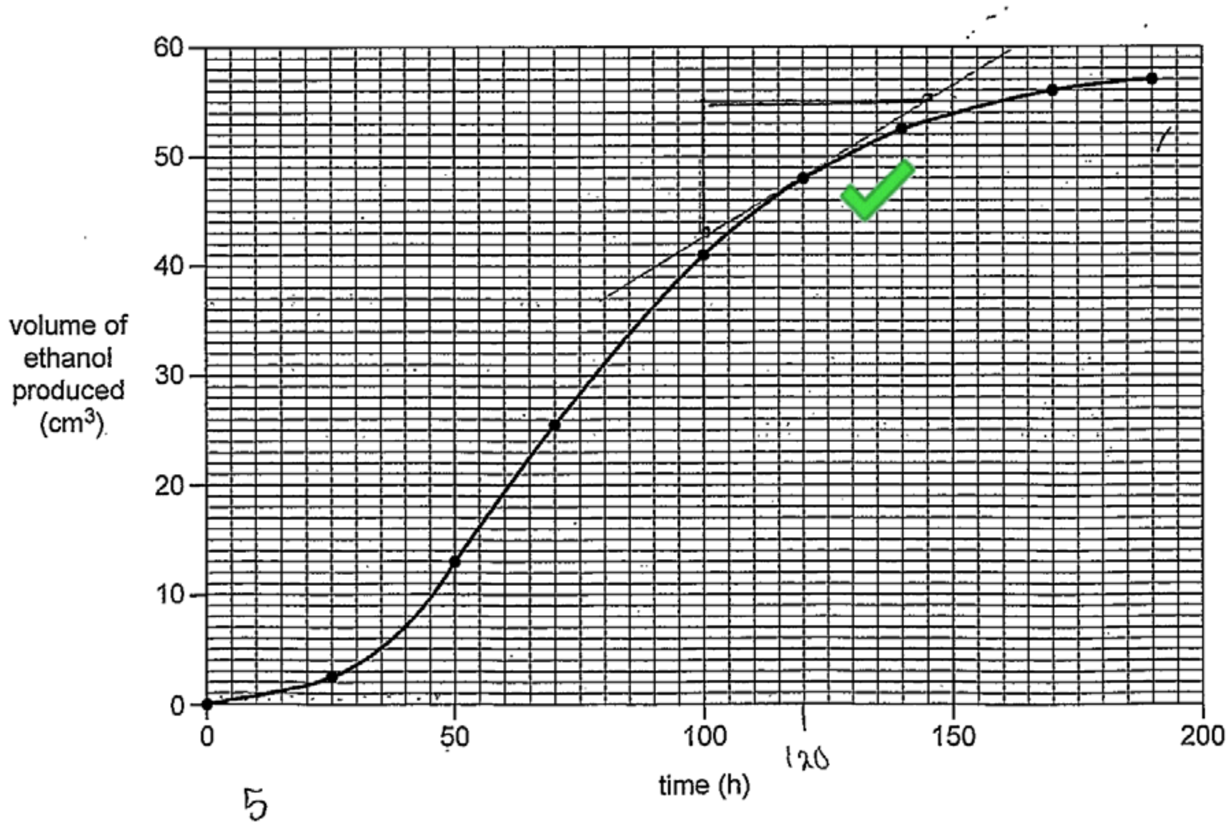

Fig. 3.1

Question 3 (c) (i)

(c) The students carry out investigations to determine the rate of reaction at different temperatures.

The graph in **Fig. 3.2** shows how the rate of reaction changes over a range of temperatures.

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Fig. 3.2

(i) What conclusions can be made from the graph in **Fig. 3.2**?

Explain your answer.

....

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....

.... **[3]**

A significant number of candidates identified the optimum temperature, however, fewer candidates could explain the shape of the graph and relate it to the structure of the enzyme. The most common creditworthy responses identified the optimum temperature, explained that after this temperature the rate of enzyme reaction decreased and that this was due to the denaturing of the enzyme. Centres should try to give candidates the skills to relate the shape of such a graph to scientific knowledge.

Question 3 (c) (ii)

(ii) Suggest how the optimum temperature could be estimated with more accuracy.

....

....

.... **[2]**

The majority of candidates did not give a creditworthy response here. This question provides a good learning opportunity for future cohorts, drawing attention to the need to focus on a smaller range of temperature for a second experiment and to reduce temperature intervals to ensure a greater accuracy.

Centres should ensure that candidates can describe how a generic method can be altered to improve accuracy.

Question 3 (d)

(d) Ethanol can be made industrially from ethene.

The chemical reaction is shown below.

ethene	+	water	$\rightleftharpoons$	ethanol
C_2H_4 (g)	+	H_2O (g)	$\rightleftharpoons$	CH_3CH_2OH (g)

The reaction is carried out at 300 °C at a pressure of 6–7 MPa with a phosphoric (V) acid catalyst.

Suggest **two** reasons why 93% of the world's ethanol is produced by fermentation.

1 ....

....

2 ....

....

[2]

Very few candidates engaged with this question to compare the production of ethanol by the two methods. Where credit was given it was for a variety of reasons and all marking points were seen.

Question 4 (a) (i)

4 PET is the main type of polymer used for manufacturing plastic drinks bottles.

(a) **Table 4.1** shows part of a Life Cycle Assessment (LCA) for PET bottles.

The LCA is from the production of PET to the sale of the bottles in supermarkets.

Part of LCA	**LCA for 1000 PET bottles**	
	New PET	**30% recycled PET**
Coal used (kg) – energy	17.1	14.1
Oil used (kg) – feedstock and energy	49.8	39.2
Gas (m^3) – feedstock and energy	45.2	34.8
Energy used (MJ)	5053.0	3979.0
Carbon dioxide production (kg)	164.0	132.0

Table 4.1

(i) Which statements about the Life Cycle Assessment for PET bottles are **true**, and which are **false**?

Put a tick (✓) in one box in each row.

	True (✓)	**False (✓)**
Coal, oil and gas are used as chemical feedstock for producing PET.		
The energy to produce new PET bottles is 5053 kJ per bottle		
Carbon dioxide production is around one-fifth less when using 30% recycled PET.		

[3]

The majority of candidates were credited with two or more marks with the middle statement being the one that caused the most difficulties.

Question 4 (a) (ii)

(ii) Describe **one** of the processes used to recycle PET drinks bottles.

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.... **[4]**

This was a question that required recall of either the open or closed loop system used in recycling PET. Very few candidates seemed to be confident with this process and did not use the correct key terminology used to describe the recycling process. The candidates that did give creditworthy answers generally opted for the open loop recycling process.

Question 4 (b) (i)

(b) The PET polymer was considered non-biodegradable.

In 2016, scientists in Japan discovered a type of bacterium, normally found in the soil, living on the surface of waste PET bottles. The bacterium produces enzymes that break down the polymer.

The scientists think that the bacterium may be useful in the recycling of the plastic.

(i) Suggest **one** way in which the bacterium might improve recycling.

....

.... **[1]**

Very few candidates gave a creditworthy answer here. The idea of our ease of preparing such bacteria to be helpful in reducing waste evaded almost all candidates. Those that did give a creditworthy answer talked about the reduced energy costs.

Question 4 (b) (ii)

(ii) PET was developed in 1941. PET bottles were first used in 1973.

Until 2016, no bacterium had been found that would biodegrade this plastic.

Suggest the genetic changes that occurred in this soil-living bacterium after 1973.

Explain your answer.

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....

.... **[4]**

This was a relatively abstract question that needed candidates to apply their knowledge of the process of natural selection to an unknown and unusual context.

Many candidates were able to use the information about 'genetic changes' given to them in the stem of the question to develop this to describe the 'mutation', which then would lead to the production of different enzymes that could break down the PET.

Some candidates were able to take this idea and develop it in the context of the scenario provided and whilst they were able to describe the process of natural selection, they did not apply it to the context of the bacterium breaking down PET.

Very few candidates were credited the final mark for the idea that the gene/allele/variant would increase in the population. To prepare for this type of question centres show use a variety of scenarios and ask candidates to apply the general statements of natural selection.

Question 5 (a) (i)

5 The decay of radioactive isotopes is important in dating archaeological and fossil objects.

(a) An isotope of carbon, called carbon-14, is present in small amounts in all living things.

Carbon-14, or ^{14}C, is important in dating objects in archaeological studies.

(i) Carbon-14 decays by emitting a β-particle and forming an isotope of nitrogen.

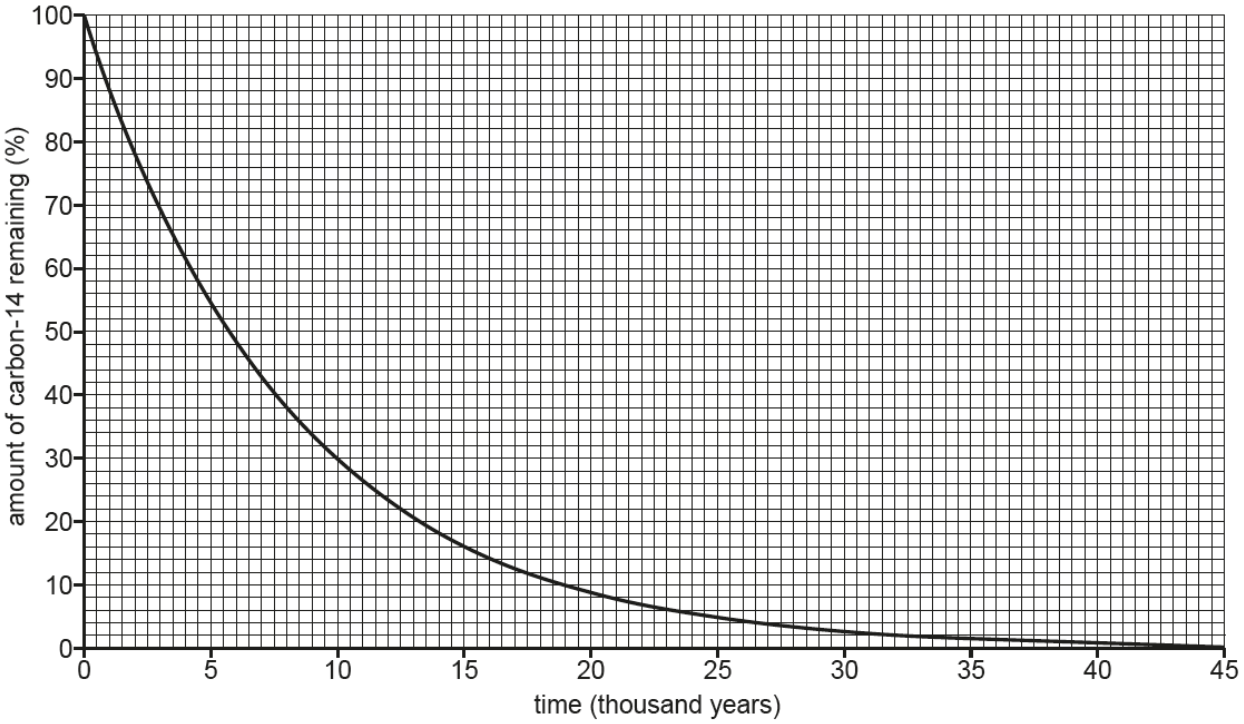
Complete the equation for the decay of carbon-14.

$$^{14}_{6}C \rightarrow \,^{\cdots\cdots}_{\cdots\cdots}N + \,^{\cdots\cdots}_{\cdots\cdots}\beta$$ **[3]**

Centres need to take responsibility for teaching this correctly to candidates. A large number of candidates did not gain credit on this question. At least one mark could have been credited by the correct use of the periodic table to give the atomic number of nitrogen. Even lower ability candidates should have been able to access this mark but as it turned out few higher ability candidates gained credit here. Centres need to prepare candidates by practising a wide range of alpha and beta decay equations.

Question 5 (a) (ii)

(ii) The graph shows the decay curve for carbon-14.



Use the graph to find the half-life of carbon-14.

Show your working on the graph.

Half-life = ... years **[2]**

The biggest issue here was the candidates not reading the scale of the graph correctly. The x axis is given in thousand years but the answer line gave the unit of years so candidates needed to take this into consideration when quoting their calculated value.

A construction line is expected for credit to be given for the calculation from the graph. This is particularly important when candidates are told to 'use the graph'.

Question 5 (b) (i)

(b) Living organisms exchange carbon, including carbon-14, between themselves and the environment. When an organism dies, this carbon is no longer exchanged and the amount of carbon-14 present decreases as the organism decays.

The age of the archaeological remains of humans and other organisms can be estimated from the proportion of carbon-14 that remains undecayed.

(i) Suggest **one** assumption that must be made when dating samples using carbon-14.

....

.... **[1]**

This mark was very rarely credited. A wide variety of responses were seen with most missing the point of the reduction of carbon 14 after an organism had begun to decay.

Question 5 (b) (ii)

(ii) When potassium-40 decays, one decay product is argon-40.

Argon-40 makes up 99.6% of the argon on earth.

The half-life of potassium-40 is 1.251×10^9 years.

Explain why carbon-14 can only be used to date objects up to around 50 000 years old, but potassium-40 can be used to date rocks containing fossils many millions of years old.

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.... **[5]**

Candidates were usually credited marks for the comparison of the size of the half-life of carbon 14 and potassium 40. Centres should ensure candidates are taught the correct key terminology when referring to the size of the half-life of a substance. For example the words 'short' and 'long' are good key words to use when describing a half-life but 'high' and 'low' are not the correct terminology to use. Similarly when describing the rate of decay the words 'slowly' and 'quickly' are both correct terminology but ''big' and 'small' are not suitable terminology to use.

Question 5 (c)

(c) Some stable isotopes are used to investigate archaeological objects.

In 2012, the skeleton of King Richard III was discovered under a car park in Leicester.

Scientists analysed levels of the stable isotopes nitrogen-15 and oxygen-18 in teeth from the king's skeleton. These isotopes do not decay and their levels remain constant.

Suggest how the ^{15}N was taken into the king's body.

.... **[1]**

Candidates frequently referred to the nitrogen entering the body through the soil. This was not creditworthy.

Question 6 (a) (i)

6 Amir is investigating the properties of types of resistor.

(a) He sets up a circuit to measure the resistance of a thermistor at different temperatures.

(i) Draw a suitable circuit diagram for the experiment.

[2]

Candidates found it difficult to draw the circuit symbol for a thermistor. The line often became an arrow. The ammeter and voltmeter were rarely seen in the correct positions to enable the current and voltage to be accurately measured. Centres need to address the candidates' ability to draw simple circuit diagrams.

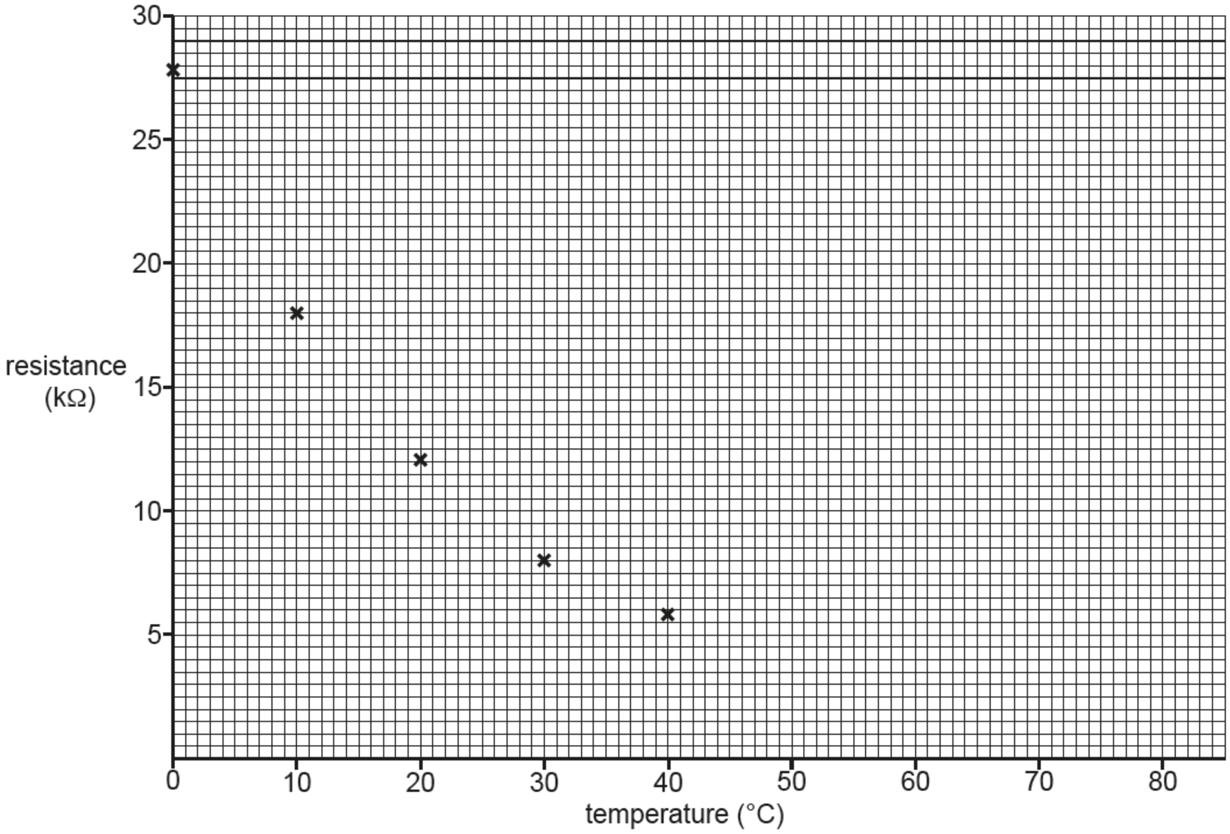
Question 6 (a) (ii)

The results of Amir's experiment are shown in **Table 6.1**.

Temperature (°C)	Resistance (kΩ)
0	27.7
10	18.1
20	12.1
30	8.3
40	5.8
50	4.1
60	3.0
70	2.2
80	1.7

Table 6.1

(ii) Complete the graph by plotting the results from **Table 6.1** and draw a line of best fit. Some have been plotted for you.



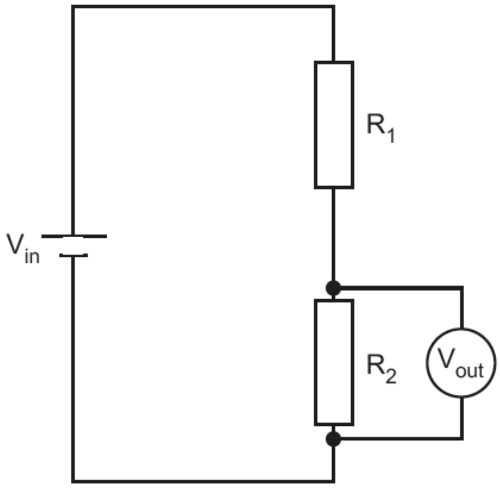
[2]

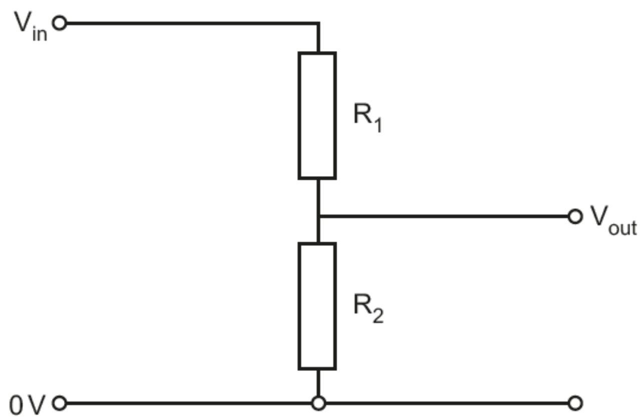
Many candidates did not plot the points correctly and/or draw a smooth curve as a line of best fit. The skill of drawing this type of line of best fit should be practised often and throughout the course as it is a skill that could be examined on any of the papers in the combined suite. In addition to this, centres should encourage candidates to start their lines on the first point and end the line at the last point, explaining for clarity what extrapolation is and why it would not be appropriate.

Question 6 (b) (i)

(b) Two resistors in series produce a potential divider circuit. The resistors divide the input voltage between them.

The diagrams below show a potential divider circuit. The same circuit is shown in two different ways.





The equation below is a mathematical model for the potential divider circuit.

$$V_{out} = \frac{R_2}{R_1 + R_2} \times V_{in}$$

(i) Amir sets up the circuit above.

$V_{in} = 10\,V$

Resistor R_2 has a value of 10 kΩ.

Amir replaces R_1 in the circuit diagram with the thermistor he used in his experiment.

He carries out this new experiment at 15 °C.

Using the equation above, and the information from the graph, predict a value of V_{out}.

Give your answer to **1** decimal place.

Predicted value of V_{out} = ... V **[3]**

Candidates struggled to read the information from their graph and often misread the scale to give the wrong value for the calculation. Some candidates inserted the 15 degrees into the equation rather than using their graph at all.

Candidates also made errors in rounding to one decimal place. Some candidates gave the answer of '4' but did not give this value as '4.0' which would have gained credit for an answer to one decimal place.

Question 6 (b) (ii)

(ii) Using this model, what effect would increasing the temperature to 90 °C have on V_{out}?

....

.... **[1]**

A large number of candidates could describe the relationship between increasing the temperature to give an increase in voltage.

Question 6 (b) (iii)

(iii) Calculate the current in the potential divider circuit at 60 °C.

Current = ... A

[4]

Very few candidates gave answers that were creditworthy here. The biggest issue was the lack of addition of the resistance in series and the recognition that the resistance was quoted in kilo-ohms. Where candidates were given credit it was generally for the recall of the correct formula linking current, voltage and resistance.

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http://www.ocr.org.uk/administration/support-and-tools/active-results/

CPD Hub
Your route to OCR's teacher training

Attend one of our popular CPD courses to hear exam feedback directly from a senior assessor or drop in to an online Q&A session.

https://www.cpdhub.ocr.org.uk

The small print

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