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Examiners' Report
November 2011

GCSE Biology/Science 5BI1H/01

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November 2011

Publications Code UG029799

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Introduction

As the first Biology paper for the new specification, this paper performed well with most candidates accessing the paper at some level. The six marker questions were accessed by most of the candidates at mark band 1 or 2 giving a mark between one and four, with the more able candidates able to attain full marks in these questions. The genetics question caused a few problems where the candidates were not specific enough in their responses, often referring to genes instead of alleles. The calculations were handled well and the interpretation of graphs were high scoring parts of questions. Candidates may like to go through percentage calculations to gain the higher grades.

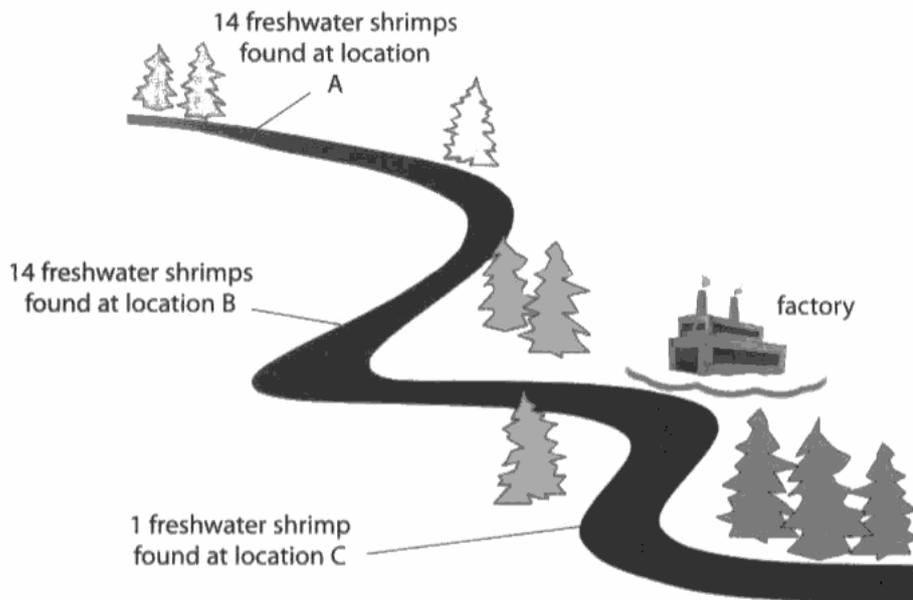
Question 1 (a)

Candidates accessed this question well but some examples of how marks were lost are included.

One mark awarded here for correctly identifying the location C.

1 Catherine is an environmentalist studying water pollution in the stream shown in the diagram.

She took samples of water from locations A, B and C and recorded the number of freshwater shrimps at each location on the diagram.



(a) Explain which location in the stream is most polluted.

(2)

location C is most polluted because there is a quarry between B and C



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Examiner Comments

Most candidates were able to access this first marking point but many did not link this to the number of freshwater shrimps thus losing the second mark.



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Examiner Tip

Make sure that candidates look to see the number of marks available for the question and give the appropriate number of points in the answer.

No marks scored for this question here due to the candidate giving an imprecise response.

(a) Explain which location in the stream is most polluted.

(2)

Because there is a factory on the bank & the waste in the air may go straight into the water, also leaks & hovers above the water.



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Examiner Comments

For this question the candidate must give one of the locations stated A, B or C; the mark is not given for vague references to the factory.



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Examiner Tip

Use the detail in the question to formulate the answer to the question.

Question 1 (d)

Many candidates failed to gain any credit for their answers as they made vague references to pollution and did not describe the effect of a build up of nitrates on an aquatic environment.

(d) Describe what will happen to the organisms in the stream when nitrates leak from the factory.

(4)

When nitrates leak from the factory then into the river it will pollute the ~~the~~ stream and kill of all the organisms, that are living there.



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Examiner Comments

In this case there are no marks as the organisms in the environment had to be linked to the reduction in oxygen levels in the water. A simple statement of pollution is not enough.



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Examiner Tip

The build up of nitrates has many consequences these need to be explained and linked together to gain the marks.

This is a good overall response gaining three marks for the layer of algae causing the plants to stop photosynthesising and causing them to die. There is no link between the other organisms dying linked to oxygen depletion.

(d) Describe what will happen to the organisms in the stream when nitrates leak from the factory.

(4)

The added nitrate cause a layer of algae to grow on top of the pond this then blocks out the sun stopping the plants from being able to do photosynthesis causing the plants to die. After the plants die they then stop producing oxygen so the fish will die as they can't breath



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Examiner Comments

This is a good answer indicating the level of response we would expect on the higher paper.

Question 2 (a) (i)

Generally candidates were good at interpreting genetic diagrams but were less sure of the terms homozygous and heterozygous.

Generally the candidates could recognise that two of the offspring had the genetic disorder cystic fibrosis.

(a) (i) State the number of offspring in generation III who will have the disorder cystic fibrosis. (1)

2 offspring



ResultsPlus Examiner Comments

One mark clearly achieved here, it was also acceptable if a candidate named the offspring ie 2 and 3.

Clear, correct answer given for one mark.

(a) (i) State the number of offspring in generation III who will have the disorder cystic fibrosis. (1) ×

2



ResultsPlus Examiner Comments

Interpretation of genetic diagrams is good overall but candidates need to ensure they do not get confused between carriers of the CF allele and people with CF.



ResultsPlus Examiner Tip

If the question asks for the number of offspring then the overall number should be given.

Question 2 (a) (iii)

Overall this question resulted in many vague responses which were not worthy of credit. On genetics questions candidates need to make specific reference to the dominant or recessive allele not gene.

Candidates did less well on this question mainly due to them not being precise enough in their answer. There were many references to carriers but this was not specific enough.

(iii) Explain why both individuals in generation II must be heterozygous for cystic fibrosis.

Because both there parents are carriers (2)
of the disease, but dont actually have
it.



ResultsPlus Examiner Comments

This is an example of the vague responses given by candidates to this question. Many candidates just described the term heterozygous, they needed to refer to the recessive allele for CF not the gene.



ResultsPlus Examiner Tip

Candidates need to be as precise as possible when dealing with genetics questions, also link the recessive allele to the fact that two of the offspring had CF so must have inherited one recessive allele from each parent.

This is an example of a candidate's vague response. The parents could be unaffected if they were homozygous dominant also.

(iii) Explain why both individuals in generation II must be heterozygous for cystic fibrosis.

(2)

Because none of the parents are affected by cystic fibrosis.



ResultsPlus
Examiner Comments

Candidates need to be much more specific and detailed in their response to genetics questions. References to the recessive allele being inherited from each of the parents would gain credit.



ResultsPlus
Examiner Tip

Be very careful with genetics questions to refer to the specific allele responsible for a disorder and not make vague references to genes.

Question 2 (b)

Generally this question was well accessed by most candidates although some slip ups especially using the wrong gametes or putting both gametes in each square.

Generally well answered by candidates, the Punnett square had two specific marking points for the gametes and the offspring.

(b) Complete the Punnett square to illustrate the inheritance of cystic fibrosis from the two heterozygous parents in generation II.

Use B for the dominant allele and b for the recessive allele.

(2)

		female	
		B	b
male	B	BB	Bb
	b	bB	bb



ResultsPlus Examiner Comments

This is a clear example of two marks here, we allowed the candidates to put the Bb in the wrong order.



ResultsPlus Examiner Tip

Make sure when drawing Punnett squares that there is only one allele in each of the squares for the gametes and two alleles for each of the offspring.

The candidate has put both alleles in as the gametes causing problems in working through the offspring, so no marks awarded here.

(b) Complete the Punnett square to illustrate the inheritance of cystic fibrosis from the two heterozygous parents in generation II.

Use B for the dominant allele and b for the recessive allele.

(2)

		female	
		Bb	Bb
male	Bb	Bb Bb	BB
	Bb	BB	Bb



ResultsPlus
Examiner Comments

Only one allele, in this case the dominant or recessive allele, can be put into the male and female gamete boxes.



ResultsPlus
Examiner Tip

Punnett squares are an easy way of completing genetic crosses, make sure the candidates are able to complete these.

Question 2 (c)

This question caused some problems for the candidates, their responses were lacking in the detail needed to gain credit. Often they just put in percentages without explaining how they came to that conclusion.

Candidates struggled to gain good marks in this question, often because they referred to the wrong generation or made references to the Punnett square completed previously.

(c) Explain why pedigree analysis would be important to the unaffected individuals in generation III.

Use percentages or ratios to help illustrate this. (2)

There is a 25% chance that a person will be affected by cystic-fibrosis if ~~the~~ both parents are heterozygous and carry a cystic fibrosis allele.



ResultsPlus Examiner Comments

This candidate has gained both marks by being specific about the detail.



ResultsPlus Examiner Tip

When a question asks you to use ratios or percentages in the answer these must be specific and correct reference made to the inheritance patterns.

Question 3 (a) (i)

Candidates often were able to pick out the correct figures but were unable to do the correct percentage calculation often putting the figures the wrong way around. However, it was pleasing to note the number of candidates who were able to access the marks successfully.

Energy

3 Scientists can show the relationships between organisms in a variety of ways.

This food chain shows the energy content at each trophic level.

plants 8450 J	→	rabbits 780 J	→	fox 90 J	→	fleas 4 J
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(a) (i) Calculate the percentage of energy that is transferred from the rabbits to the fox. (2)

answer = 12 %



ResultsPlus Examiner Comments

This candidate gained both marks even though there was no evidence of the method. It is very good practice, however, to always show the method as marks may be gained even if the calculation is incorrect.



ResultsPlus Examiner Tip

Always show your working in calculation questions as credit can be given for the correct method.

This is an example of the correct figures being used but the candidate being unable to gain any credit as they are unable to do percentage calculations.

(a) (i) Calculate the percentage of energy that is transferred from the rabbits to the fox. (2)

~~780 - 90 = 690~~

780 - 90 = 690

answer =%



ResultsPlus
Examiner Comments

It would be useful for teachers to spend time going through basic calculations in preparation for the examination.



ResultsPlus
Examiner Tip

Make sure that basic mathematical skills including calculating percentages and ratios as well as calculating the mean are completed.

Question 3 (a) (ii)

Overall this question was well accessed by candidates although a few lost marks by being too vague in their answers and not relating them back to the question or referring to energy loss from the fox rather than the rabbit.

Many candidates were able to gain one if not two marks here by relating this to the basic life processes although a few candidates lost marks by referring to growth as a way of energy loss.

(ii) State **two** ways in which energy can be lost between the trophic levels of the rabbit and the fox. (2)

1 through excretion of the rabbits

2 through the rabbit moving and releasing energy.



ResultsPlus
Examiner Comments

This candidate has accessed both marks with excretion and movement causing energy to be used.



ResultsPlus
Examiner Tip

Ensure if the question asks for two ways that you actually include two ways of the energy being lost.

Although generally well answered, a few candidates, like the one below, lost out on marks due to a lack of relating the answer back to the question.

(ii) State **two** ways in which energy can be lost between the trophic levels of the rabbit and the fox.

1 Fox hunting rabbits take time to pass on. (2)

2



ResultsPlus
Examiner Comments

In this case if the candidate had stated the rabbit loses energy as it has to move fast to get away from the fox hunting it, that would be worth the mark.



ResultsPlus
Examiner Tip

Please try to read the question carefully before answering it and relate the answer back to the question.

Question 3 (b)

Overall most candidates gained at least one mark for this question, usually for restricting the movement of the chickens so less energy is lost.

(b) Suggest how a farmer rearing chickens could limit energy loss from the chickens.

(2)

He could keep them eating on a regular basis and avoid them from using that energy by not letting them run around.



ResultsPlus Examiner Comments

In this case it is important for the candidate to note that there are two marks for the question so we are looking for two methods of reducing energy loss rather than just one.



ResultsPlus Examiner Tip

Although a mark here could be given for higher energy/protein food there is no mark for feed more.

Once again this candidate has only accessed one of the two marks in this case for the keeping warm.

(b) Suggest how a farmer rearing chickens could limit energy loss from the chickens. (2)

by keeping them warm. if a farmer keeps his chickens warm, then they won't lose much ~~energy~~ heat energy. Also don't feed them as much the more droppings they lose the more energy



ResultsPlus
Examiner Comments

As this is an applied question and we are asking candidates to suggest a way in which farmers could reduce energy loss there may be many other methods which would be marked correctly if they were viable methods.



ResultsPlus
Examiner Tip

Candidates should focus on the number of marks allocated to a question and develop their answer to ensure they have covered the required number of points especially with state and suggest questions.

Question 3 (c) (ii)

This question was less well answered as many candidates referred to what mutualism is rather than answer the question which is how do the bacteria benefit the plants. Several candidates also referred to how the bacteria benefitted from the relationship but again this is not what the question asked.

- (ii) Peas and beans are known as legumes.
They form a mutualistic relationship with the bacteria in their roots.

Explain the importance of this mutualistic relationship to the legumes.

(3)

The nitrogen fixing bacteria feeds ~~from~~
~~dead matter~~ on the roots of legumes
which leave the roots of the legumes
clean and help their growth. It is
mutualistic because the bacteria is being
fed.



ResultsPlus
Examiner Comments

The candidate gains credit for one mark for recognising that these bacteria are nitrogen fixing bacteria. If they had gone on to say that they form nitrates they would have gained a second mark here.



ResultsPlus
Examiner Tip

It is vital that candidates answer the question asked and not just read the introduction to the question. The question in this case is very specific and therefore so is the answer required.

This is an example of the candidate not reading the question clearly.

- (ii) Peas and beans are known as legumes.
They form a mutualistic relationship with the bacteria in their roots.

Explain the importance of this mutualistic relationship to the legumes.

(3)

the bacteria helps the peas and beans grow, so without them they would be tiny, or if the relationship wasn't mutualistic the bacteria would infect the peas and beans



ResultsPlus

Examiner Comments

The answer is too vague, the candidate needs to state how the bacteria help the plants to grow by providing them with essential nitrates.



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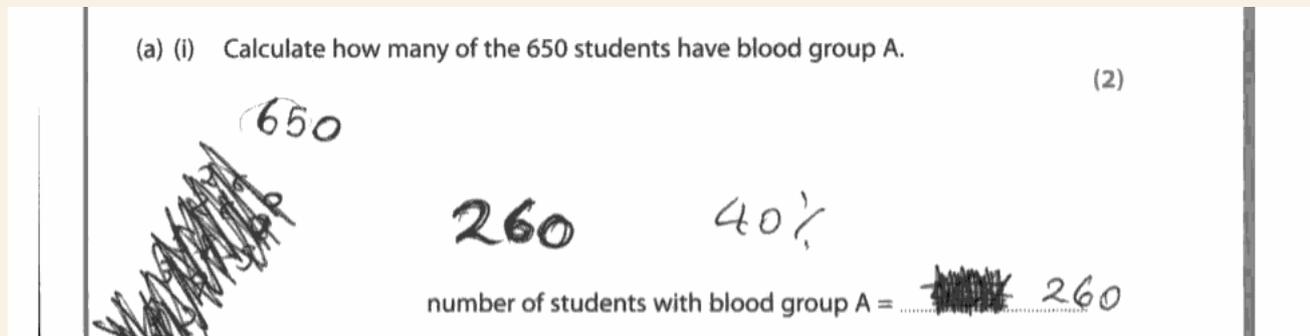
Examiner Tip

When there is an introduction to the question it is vital that the candidates focus on what is required from the question.

Question 4 (a) (i)

This was generally well answered with candidates finding this a much easier percentage calculation although a few candidates lost marks because of mathematical errors.

Generally this calculation was well answered and students coped better with this percentage calculation than the one on energy in trophic levels.



ResultsPlus Examiner Comments

This candidate did not show any method but they gained both marks as they calculated the correct answer.



ResultsPlus Examiner Tip

Even if the calculation is simple and you can do this on your calculator it is good practice to show your working as then, if you have a minor calculation error, marks can still be awarded for the method.

The candidate gained both marks here but if they had written the method down and got the wrong answer they could still have gained one mark.

(a) (i) Calculate how many of the 650 students have blood group A.

(2)

$$\begin{array}{l} 650 \div 100 = \\ 6.5 \quad 6.5 \times 40 = 260 \end{array}$$

number of students with blood group A = 260



ResultsPlus
Examiner Comments

The candidate has written a clear method and got the correct answer so gained full credit.



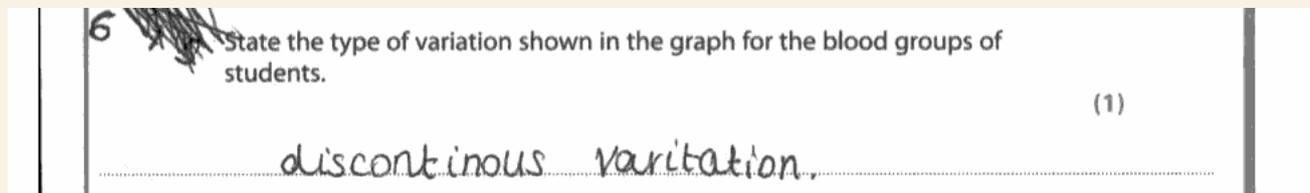
ResultsPlus
Examiner Tip

Write down all stages in the calculation to maximise your marks.

Question 4 (a) (ii)

Many candidates were able to identify this as discontinuous variation and we also allowed discrete variation as an alternative here.

The most common incorrect response given was genetic variation which could not be construed from the graph.



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Examiner Comments

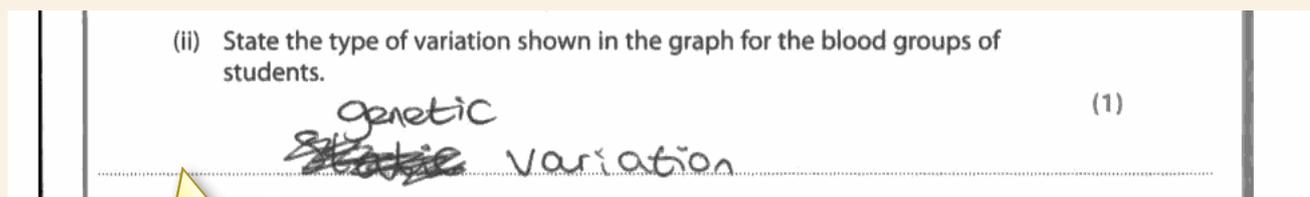
Correct response, gets one mark.



ResultsPlus
Examiner Tip

When asked for the type of variation shown by the graph this must either be continuous or discontinuous. In this case as blood groups do not vary over a range this is discontinuous.

The question is specific about the need to use the graph to state the type of variation.



ResultsPlus
Examiner Comments

Many candidates came up with genetic variation but this cannot be construed from the graph, only from the information so it is not a correct response to the question.



ResultsPlus
Examiner Tip

When using data make sure that you refer directly to the graph, in this case there is only one answer and that is discontinuous variation.

Question 4 (b) (ii)

Overall candidates gained one or two marks on this question with most of them able to interpret something from the graph.

Many candidates scored one or two marks on this question, the most accessible mark was for a correct interpretation of the data, the candidates did not have to manipulate the data merely make a correct statement based on this.

(ii) Describe the variation in height of these students, as shown in the graph.

(3)

This variation of height is called continuous variation, the range of numbers of heights goes from 130 to 175 and over, the difference between the heights is 45.



ResultsPlus Examiner Comments

Some candidates also recognised this data as continuous as did this candidate. Only a few candidates could recognise this as a normal distribution curve although some did describe the bell shaped curve.



ResultsPlus Examiner Tip

When asked to describe the graph candidates should try to be as technical as possible. They should use the terminology such as continuous data and normal distribution curve as well as quoting data from the graph to gain maximum marks.

Question 4 (c)

Overall candidates tended to gain at least one mark here for the process of evolution but they needed to describe the process step by step in order to gain the higher marks.

Overall most candidates have gained at least one mark on this question but many got side-tracked by the mention of taller animals and spent a long time describing how giraffes may have evolved longer necks.

(c) Taller animals may have an evolutionary advantage.

Explain how evolution by natural selection brings about changes in a species.

(3)

Natural selection is the survival of the fittest. According to Darwin's theory of evolution, changes occur in a species that may increase its advantages of surviving. In this case taller animals such as giraffes with their long necks - are better suited to the environment. Animals that ~~are shorter~~ have the shorter characteristics may be lost over time.

(Total for Question 4 = 10 marks)



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Examiner Comments

In this case the candidate gained the mark for the survival of the fittest as an evolutionary process. Candidates needed to describe the process of evolution to gain full marks.



ResultsPlus
Examiner Tip

Candidates need to be careful not to get side-tracked by a statement: this question was about the evolutionary process not the development of longer necks in giraffes.

This candidate gained one mark for the idea of taller animals being able to out compete smaller ones for food.

(c) Taller animals may have an evolutionary advantage.

Explain how evolution by natural selection brings about changes in a species.

(3)

Such as taller animals they can reach taller places such as trees, which no other animal can reach. Therefore the taller animal can eat more food. Over years more and more food has gone and some animals have adapted to stay alive in different ways!



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Examiner Comments

This candidate did not go on to explain the processes of evolution such as survival of the fittest or the idea of passing on the genes for advantageous characteristics to their offspring.



ResultsPlus
Examiner Tip

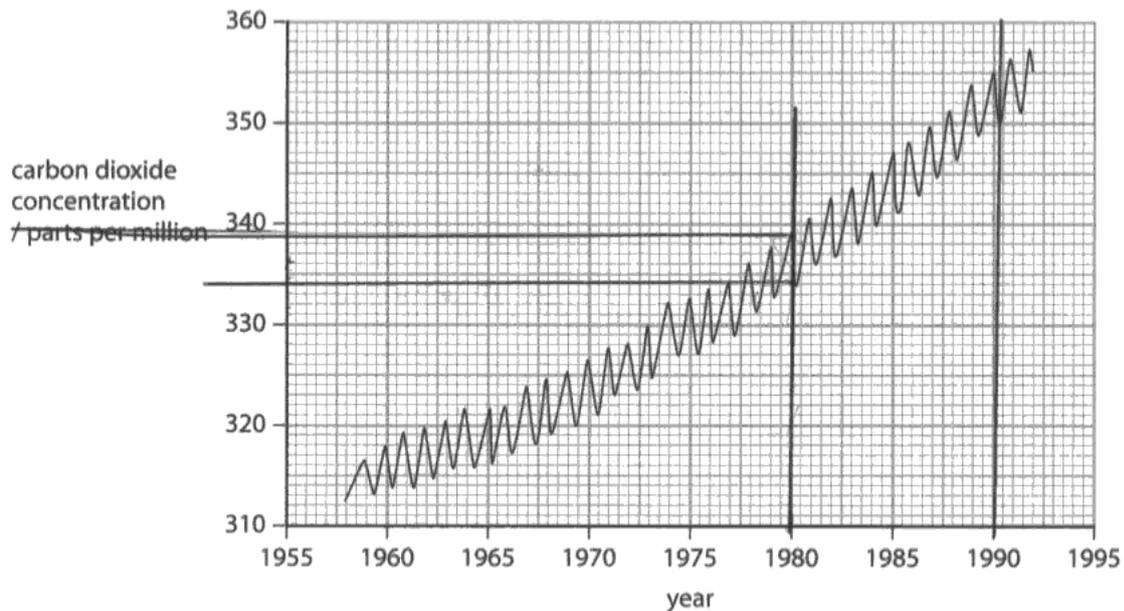
Be careful to read the whole question and ensure that you are answering the question asked rather than focusing on the wrong part of the question.

Question 5 (a) (i)

Overall this was answered well. Where candidates have lost marks it is due to them not quoting correctly from the graph or not giving the overall trend but talking about the fluctuations.

5 Carbon dioxide concentration in the air is thought to be changing as a result of human population increase.

The graph shows how the concentration of carbon dioxide in the atmosphere has changed in Europe between 1958 and 1992.



(a) (i) Describe the main trend shown in the graph.

(1)

The amount of carbon ~~dioxide~~ dioxide concentration in the air has risen,



ResultsPlus
Examiner Comments

In this case the candidate has quoted effectively from the graph and identified the overall trend.



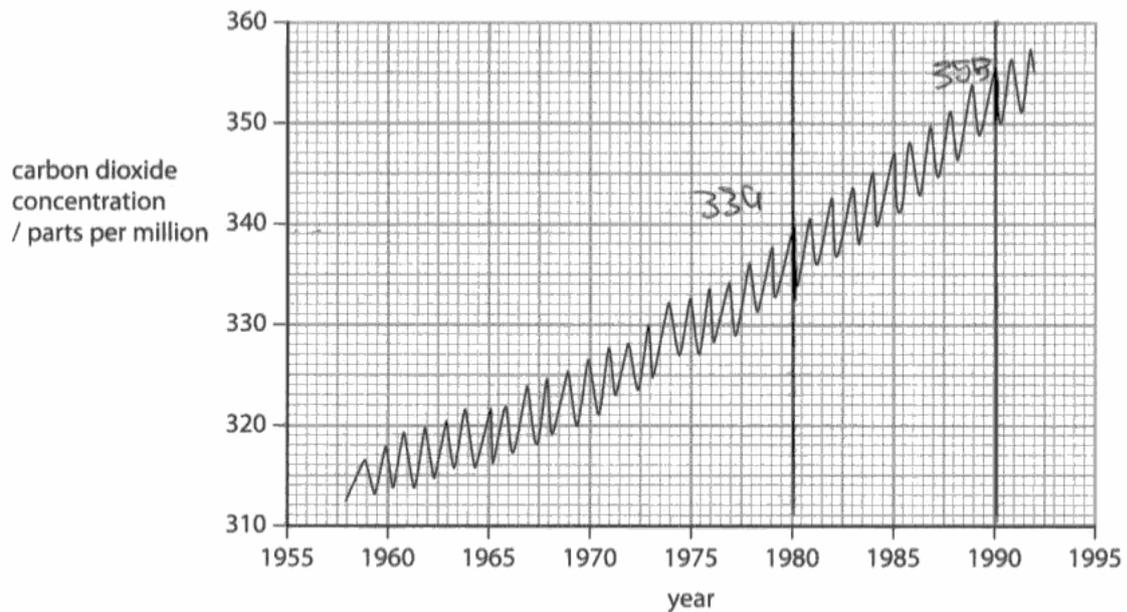
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Examiner Tip

Be careful to describe the overall trend here and not talk about the fluctuations.

Credit would be given here for the overall trend being that carbon dioxide concentrations are increasing.

5 Carbon dioxide concentration in the air is thought to be changing as a result of human population increase.

The graph shows how the concentration of carbon dioxide in the atmosphere has changed in Europe between 1958 and 1992.



(a) (i) Describe the main trend shown in the graph.

it increases and decrease but (1)
increases more than it decreases



ResultsPlus
Examiner Comments

In this example the candidate has not been specific about what s/he is talking about and makes a vague statement which is not credited.



ResultsPlus
Examiner Tip

Be careful to quote from the graph and also if the overall trend is asked for not to talk about the minor fluctuations.

Question 5 (a) (ii)

This was well answered by most candidates. Where marks were lost it was generally due to poor reading of the scales on the graph rather than the simple calculation.

Two marks given here for the overall correct answer as in this case.

(ii) Calculate the difference in atmospheric carbon dioxide concentration in Europe between 1980 and 1990. (2)

answer = 16 parts per million



ResultsPlus Examiner Comments

Even though there is no method included as the answer is correct both marks are awarded.



ResultsPlus Examiner Tip

Even with simple calculations it is good practice to write the method you used in the calculation to ensure that if there are problems with the calculation as few marks as possible are lost.

Question 5 (b)

These questions were accessed well with most candidates who responded using a variety of methods such as diagrams, flow charts and even bullet points, all of which are acceptable.

The six mark questions have caused some worries for teachers and candidates however these were tackled reasonably well by candidates. The majority of candidates getting into band 2 or 3 giving one to four marks. The better candidates were able to access the highest band and attain six marks.

*(b) Carbon is present in a wide variety of compounds in the carbon cycle.

Describe how carbon is cycled in the environment.

(6)

Carbon ~~stat~~ cycle includes respiration and photosynthesis. There is only one source of oxygen which is plants and many sources of carbon. We breath out carbon dioxide and plants take it in and let out oxygen also combustion gives off carbon as it is burning things. Then the cycle all happens again. But plants always take the carbon in!



ResultsPlus Examiner Comments

This response has managed to cover most of the aspects of the carbon cycle and so accesses band 3 but the flow is not coherent and it lacks some clarity so ends up at five marks.



ResultsPlus Examiner Tip

For the six mark questions it is possible to draw this as a diagram, as long as it is annotated, or a flow chart. In some cases bullet pointed lists can still gain maximum marks.

As you can see this is a more limited response but nevertheless the candidate has managed to access mark band 2.

*(b) Carbon is present in a wide variety of compounds in the carbon cycle.

Describe how carbon is cycled in the environment.

(6)

The fossil fuels burn of carbon which then the plants, trees take in for protein and energy. An animal then eats the protein and energy from the plants, trees and then decomposing it, it then sends more carbon into the air as well as it turning into fossils. ~~It then goes to the plants~~ And then the ~~cycle~~ repeats it self.
cycle



ResultsPlus Examiner Comments

The candidate has managed to get to band 2 as there is a method of removal of carbon dioxide by plants and a method of returning carbon dioxide to the atmosphere. The response does lack a little clarity so overall this gains a mark of three.



ResultsPlus Examiner Tip

Always choose the best method of presenting the information, for the carbon cycle an annotated diagram may be the best method.

Question 6 (a) (ii)

This was only accessed by the better candidates.

This was a challenging question at the end of the paper and was only accessed by the high end candidates

(ii) State the part of the brain that controls body temperature. (1)

(~~homeostasis~~) stimulus homeostasis



ResultsPlus Examiner Comments

This was a common misconception with this question where candidates did not read the question carefully and gave the name of controlling the body temperature rather than the part of the brain where it is controlled.



ResultsPlus Examiner Tip

Always read the question carefully and make sure you answer the question asked.

Question 6 (b)

Most candidates were able to gain one mark here but often did not link the mechanism of heat loss with the way in which it was carried out.

There were several ways in which this question could be accessed but to gain the marks the candidate had to link the method of heat loss with how this method manages to either cool or heat the body.

(b) Describe **one** way in which the skin helps in the control of body temperature.

(2)

The skin acts as a layer which it doesn't let heat out but it also doesn't let heat in.



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Examiner Comments

The candidate has gained one mark here but failed to state how sweating results in heat loss by the sweat evaporating off the skin removing heat with it.



ResultsPlus
Examiner Tip

If the question is a describe question then the candidate must link together the way in which the body is cooled and how this is carried out.

The candidate gained one mark here for mentioning sweat being released.

(b) Describe **one** way in which the skin helps in the control of body temperature.

(2)

The skin helps by opening up and letting out the heat and sweat. This then helps to instantly cool you down.



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Examiner Comments

Although the candidate did not explain the mechanism of heat loss they mentioned the heat released but did not link this to the heat being removed when the sweat evaporates.

Question 6 (c)

This question was aimed at the higher grade boundaries and has been very discriminating. Explain questions always need to be punctuated by scientific principles.

Many candidates failed to gain high marks in this question as they failed to link the temperature regulation with the role of enzymes.

(c) Explain why humans need to maintain their body temperature at 37 °C.

(2)

Inside the body, the organs need to stay at a warm, steady temperature to keep functioning.



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Examiner Comments

This candidate just repeated the question rather than answering this in the appropriate way. This is an explain question and so it must be punctuated by scientific principles.



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Examiner Tip

Whilst answering explain questions you must apply scientific principles to the answer and not give general answers.

Question 6 (d)

The six mark questions were generally accessed well by candidates with the majority scoring in band 1 or 2 gaining marks one to four. Questions can be answered with the help of diagrams or flow charts to punctuate the prose.

The question is about vasodilation and vasoconstriction however the candidates do not have to use these terms to access the mark bands, a description of the terms is sufficient. To gain mark band 3 the candidate must mention the method of heat loss by radiation or convection.

*** (d) Explain how changes in the volume of blood going through the skin help to maintain body temperature.**

alive.
(6) (vaso dilation)

If there is more blood near to the skins surface, the blood will cool down because the heat from the blood is being transferred ~~from~~ ^{to} the environment, maintaining the 37°C temperature.*

If there is less blood near to the skins surface (vasoconstriction) the bloods heat wont transfer into the environment, keeping the blood at 37°C. This happens when we are too cold.

* This happens when we are too hot.



ResultsPlus Examiner Comments

This response clearly describes both vasodilation and vasoconstriction but does not mention the method of heat loss so clearly in band 2. The answer flows and is written with clarity so the candidate gains four marks.



ResultsPlus Examiner Tip

Try to put as much detail in as you can in the six mark questions but be careful not to put in wrong science as this can move you to the bottom of the band.

The candidate has given a brief description of both vasodilation and vasoconstriction even though the words are not mentioned.

*(d) Explain how changes in the volume of blood going through the skin help to maintain body temperature.

(6)

if the body is too warm then the blood vessels dilate ~~more~~ and rise near the surface of the skin allowing more heat to be lost. if it's too cold then the blood vessels will constrict and go away from the surface of the skin to prevent more heat loss and to preserve the heat.



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Examiner Comments

The candidate has accessed mark band 2 but because the answer does not flow and the spelling and grammar is weak the candidate only attains three marks.



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Examiner Tip

When writing the six mark questions try to structure the answer before starting to write, to ensure that it is clear and coherent. Remember spelling, punctuation and grammar at all times.

Paper Summary

Question 1 on pollution performed well but the four mark question on eutrophication held some problems for the less able candidates. Question 2 on genetics showed that the majority of candidates are able to draw good Punnett squares and draw conclusions on genetic diagrams. Question 3 caused some problems especially in calculating percentages on different trophic levels. Question 4 had candidates showing good data handling skills but the question about evolution was only accessed by the more able candidates. Question 5 again shows the candidates have skill in graph interpretation but many failed to note the changes within the year were seasonal. Question 6 had some higher demand questions which were accessed by the most able but the link between enzymes and the regulation of body temperature was only picked up by a few.

Grade Boundaries

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