

Principal examiner reports for teachers

Principal examiner reports for teachers summarise what candidates did well and what candidates needed to improve for this examination series only.

This report is to be used in conjunction with the question paper and mark scheme.

For guidance on teaching and learning we provide resources for many of our syllabuses.

Resource	Where to find it
Grade descriptions – Grade descriptions describe the level of performance typically demonstrated by candidates achieving the different grades awarded for a qualification.	School support hub Select: Subject > Resource finder > Syllabus and specimen materials
Schemes of work – Schemes of work are designed to support you in your teaching and lesson planning.	School support hub Select: Subject > Resource finder > Teaching and learning
Lesson planning – Guidance on how to plan a lesson.	Lesson planning
Resource plus – There may be additional resources such as teaching packs containing lesson plans, resources and worksheets and videos for aspects of your syllabus.	School support hub Select: Subject > Resource finder > Teaching and learning
Teaching tools	Teaching Tools
Exemplar candidate responses	School support hub Select: Subject > Resource finder > Teaching and learning
Learner guide – A guide for students to help them understand what the course involves.	School support hub Select: Subject > Resource finder > Teaching and learning
Community forums – Do you have a question or something to share? Our online forums are great way to keep up to date with your subject and the global Cambridge community.	Community forum on the school support hub
Access to scripts for this series.	Access to scripts service
Results analysis is available for some syllabuses.	Results analysis
Test maker is available for some subjects.	Test maker

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ENVIRONMENTAL MANAGEMENT

Paper 0514/12 Theory

Key messages

What candidates did well

- Most candidates demonstrated knowledge of a broad range of topics and in many cases were able to use appropriate scientific and technical language.
- Candidates were able to evaluate information in a pie chart and read data from a graph.
- Candidates were able to plan and structure responses requiring longer responses so that information was sufficient and presented in a logical order.
- Most candidates showed good application of simple mathematical skills to determine information from unfamiliar data.

What candidates needed to improve

- Check for questions where the response needed is an annotation in the paper rather than completion on an answer line. Some candidates omitted these questions despite performing well on other questions.
- Greater clarity on the causes and impacts of climate change, ozone depletion and acid rain. These concepts were often confused.
- Ensure responses that use information provided in the paper interpret the data rather than simply restating the published information.
- Produce the graph type stated in the question with an appropriate linear scale.
- Demonstrate awareness of the content of an environmental impact assessment.

Comments on specific questions

Section A

Question 1

(a) (i) Comprehensive responses

- Correctly demonstrated an ability to match the data and pie chart to the key.

Limited responses

- While often successfully listing the percentages in order, omitted to include the 'other' category in the correct ranking.

(ii) Comprehensive responses

- Correct calculation of the missing data from the table.

Limited responses

- Incorrect calculation of the 'other' category or omitting the question.

(b) (i) Comprehensive responses

- A succinct explanation of the location of the fuel from the sedimentary rock.

Limited responses

- Incorrect responses often referenced ground water and the risk of pollution rather than identifying the need to get to the correct rock type.

(ii) Comprehensive responses

- An understanding that the rock needs to be fractured as part of the extraction process.

Limited responses

- A confusion about the need for high pressure and the role of sand which did not address the question presented.

(iii) Comprehensive responses

- An understanding that the role of the sand is to keep cracks/fissures in the rocks open.

Limited responses

- A misunderstanding that the sand is needed to enable oil/natural gas to be absorbed.

(iv) Comprehensive responses

- Able to name two substances collected during the fracking process.

Limited responses

- Candidates lacked detail, for example referring to gas rather than the specific type, and some showed a misunderstanding that rock is extracted during the process.

(v) Comprehensive responses

- Able to name a sedimentary rock, the best responses stating shale.

Limited responses

- Incorrect examples such as igneous or metamorphic rocks.

Question 2

(a) Comprehensive responses

- Good, detailed explanations which used the information in the photograph to identify windbreaks, the ability for soil to be held by the roots of the trees and the linked impacts on wind and water erosion

Limited responses

- Limited use of the image with little or weak explanation or describing other strategies to prevent soil erosion which did not relate to the trees in the photograph.

(b) Comprehensive responses

- Able to name two other distinct strategies to reduce soil erosion such as managing grazing or the use of terracing or bunds.

Limited responses

- Citation of two very similar methods or a repetition of the methods shown within the photograph.

(c) Comprehensive responses

- Able to describe the two main aspects of desertification, namely the loss of vegetation and the land becoming dry.

Limited responses

- Some responses attempted to describe a desert while another common error was to describe soil erosion rather than focusing fully on desertification.

Question 3

(a) Comprehensive responses

- Able to provide three distinct aspects within their description, namely the dam being a wall-like structure and the fact that it holds back a river/water to form a reservoir.

Limited responses

- Less precise descriptions often only focused on the storage of the water and sometimes described how this would be used to generate electricity which was not required in this specific context.

(b) Comprehensive responses

- The naming of two other ways the dam could be a benefit to the human population, most commonly identifying the potential for the generation of electricity and the opportunities for tourism or recreation.

Limited responses

- Often restating a potential benefit that is linked to the supply of fresh water. Sometimes incorrectly stating that the dam produces energy.

Section B

Question 4

(a) (i) Comprehensive responses

- Correct identification of Nigeria.

Limited responses

- Incorrect naming of another country.

(ii) Comprehensive responses

- Able to correctly read the information in the graph to interpret that the estimates from source 1 are often greater than those from source 2.

Limited responses

- Attempts to form a conclusion about LEDCs and MEDCs from the data or a statement that the two estimates were the same.

(b) Comprehensive responses

- Able to analyse the information from an unfamiliar context and apply their existing knowledge of vector control to suggest two potential benefits of using drones. Most common ideas included the idea of the ability to cover large areas and areas which are less accessible which could still harbour the vector.

Limited responses

- More generic responses, often referencing the time taken without sufficient qualification or erroneously suggesting that there would need to be no human input.

(c) Comprehensive responses

- Good descriptions of the process of creating a random sample, naming/numbering fields and then a suitable method for random selection

Limited responses

- While there are a few instances of a description of systematic sampling, some methods described would not provide a truly random selection.

(d) (i) Comprehensive responses

- Good interpretation of the data in the graph to identify a population of 110.

Limited responses

- Errors in reading the data, either the interpretation of the scale or the use of the wrong line - sprayed with water.

(ii) Comprehensive responses

- A more challenging task for many candidates. Comprehensive responses identified that there was an overall decrease in larvae populations in both treatments, but the use of insecticides was more effective.
- The use of accurately quoted data relating to the day of treatment (day 10) and the population on the final (named) date.

Limited responses

- Generic statements relating to the population of the larvae, often describing the initial increase in numbers prior to the treatment (which was not required in this question).

- Use of data stating only the population size but not the relevant day.

(e) Comprehensive responses

- Able to provide five clear descriptions of strategies that could be used to control cholera.

Limited responses

- Sometimes included key words or phrases without sufficient detail to provide a description.
- Confusion with the strategies to control malaria, which had been the focus of previous parts of **Question 4**.

Question 5

(a) (i) Comprehensive responses

- Able to correctly identify basalt as an igneous rock.

Limited responses

- Incorrect statement of rock type, often confusing with sedimentary rock (from **Question 1**).

(ii) Comprehensive responses

- Correct analysis of the rock cycle and the circling of the word 'weathering'.

Limited responses

- Omitted to read the question resulting in none of the four options being circled as directed.

(iii) Comprehensive responses

- A correct understanding of the rock cycle, naming the process as either surface run-off or through-flow.

Limited responses

- Incorrect process named such as infiltration or eutrophication.

(b) Comprehensive responses

- Candidates were able to complete the calculation correctly and recognise that the answer line required their answer to be in billion tonnes.

Limited responses

- While the correct calculation may have been achieved, the total was not amended in response to the answer line and attempted to provide all the zeros to state a billion.

(c) Comprehensive responses

- Able to provide both benefits and limitations to this unfamiliar method.
- Comprehensive responses often used the information from the calculation in **Question 5(b)** as an additional source of information to phrase their response.
- Awareness that this technique will not reduce emissions of carbon dioxide.

Limited responses

- Generic responses limited to the fact that carbon dioxide was removed from the atmosphere (information provided in the question).
- Vague references to the risk of eutrophication
- Descriptions of the role of carbon dioxide in the atmosphere.

(d) Comprehensive responses

- Able to evaluate the 4 graphs provided and conclude that graph D was the best fit for the scenario.

Limited responses

- Incorrect choice of graph, most commonly assuming the increase to be linear and choosing graph B.

Question 6

(a) Comprehensive responses

- Able to demonstrate a clear understanding of the process of an environmental impact assessment, often including details of the type of damage that might be caused, the impacts on the population and the mitigation that would be required.
- Some candidates were also able to identify that environmental impact assessments may need to be approved by the authorities.

Limited responses

- Responses showed a lack of understanding of the topic although occasionally, there were references to the potential impact on local people.
- Answers sometimes showed a confusion with the methods used to restore a site and not the original impact assessment.

(b)(i) Comprehensive responses

- The ability to interpret the scenario and correctly identify the result would be that less space is used, either allowing for a smaller landfill site or the ability to store more waste.

Limited responses

- A misunderstanding of the role of compression, suggesting it was to remove the water from the waste.

(ii) Comprehensive responses

- Three distinct reasons given for the ways the landfill site is managed. These used the stimulus material from the examination paper well, providing a development of the information to give reasons.

Limited responses

- Often lacked development of the diagram provided in the question and therefore failed to provide a description of the feature presented.

(c) Comprehensive responses

- Another question requiring candidates to interpret information provided and apply it to an unfamiliar scenario. Comprehensive responses provided good justification for their suggestions, often identifying the potential to reduce the costs of future road maintenance as well as the opportunity to increase the level of recycling of a waste product.
- Some candidates also concluded that less road cracking would enhance safety.

Limited responses

- Often lacking development of the information and simply restating the information provided.
- Lack of alternative reasons other than the stated reduction in need for landfill sites.
- Responses were sometimes single-word statements providing a lack of clarity in the response.

(d) Comprehensive responses

- Showed a clear understanding of the process of bioremediation, able to name the type of organisms involved and the impacts they may have, leading to the increase in fertility of the soil for future habitat establishment.

Limited responses

- Incorrectly described uses of landfills after their completion rather than the process of bioremediation, including the capping with topsoil and replanting, thus not necessarily dealing with the issues of the pollution and preparing the soil for future regeneration.

(e)(i) Comprehensive responses

- Able to interpret the data and complete the accurate percentage decrease calculation with an appropriate level of precision considering that included within the data provided.

Limited responses

- Used the correct information from the question but did not apply the formula correctly to complete the percentage decrease required.

(ii) Comprehensive responses

- Candidates were able to suggest how funds raised from the tax could be used for future environmental initiatives.
- Awareness that an increase in landfill costs may encourage the more efficient use of resources so less sites are required.

Limited responses

- While identifying that taxation would increase the revenue for the government, did not link its use to improvements in environmental management despite the prompting in the question.

Question 7

(a) Comprehensive responses

- A good understanding that a greater number of climate stations would mean that the data is representative or that it increases its reliability.

Limited responses

- Incorrect conclusions that using several sampling sites would increase the accuracy of the data collected.

(b)(i) Comprehensive responses

- Correct identification of July.

Limited responses

- Incorrect identification of an alternative month or providing a range of months as the answer.

(ii) Comprehensive responses

- Able to interpret the data from the graph and use this to calculate the range correctly.

Limited responses

- A lack of understanding how to calculate the range from the data.
- Misreading of the temperatures from the graph or attempting to provide the range for the year.
- Candidates should be encouraged to show their working, as this can make a correct method for calculating the range clear, even when values taken from the graph are incorrect.

(c)(i) Comprehensive responses

- Showed an understanding of the data presented and was able to accurately add these up to calculate the total mean precipitation.

Limited responses

- Whilst also adding the values, candidates often provided the mean of the mean precipitation for the climate station.

(ii) Comprehensive responses

- Neat completion of the bar chart in pencil.
- Inclusion of labelled axes (including units).
- Clear plots against a logical linear scale.
- Bars plotted to the same width.

Limited responses

- Failure to label axes.
- Line graph drawn rather than a bar chart.
- Use of a too small or a non-linear scale.
- Bars not of the same width.
- Attempting to draw the bars freehand without the use of a ruler.

(d) Comprehensive responses

- Able to evaluate the shaded area in the maps and approximate the percentage of ice lost and use this estimate to select the value closest from the options provided.

Limited responses

- None of the options circled.
- Where an answer was provided, response often estimated the area remaining rather than the area lost.

(e) (i) Comprehensive responses

- Two distinct benefits of the strategy suggested, based on their application of knowledge for this unfamiliar scenario. These included the idea that the sea ice would be thicker and the sea ice would take longer to melt.

Limited responses

- Lack of application of knowledge to the unfamiliar scenario, commonly referring to space for polar bears.

(ii) Comprehensive responses

- Identification of the challenges of operating machinery in the prevailing weather conditions, for both the reliability of the machines and the working conditions for people.
- An understanding that many holes would be needed to cover the Arctic.
- Recognition of the costs involved and the need for fossil fuels to operate the machinery.

Limited responses

- Limited reasons provided often lacking in detail as justification.
- Erroneous idea that the drilling would break up the ice cap.
- Incorrect ideas that this would reduce the availability of potable water.

(f) Comprehensive responses

- Typically, candidates provided balanced responses considering both sides of the argument to form a conclusion which could be either agree or disagree.
- Use of a broad range of points to support the argument.
- Inclusion of specific examples to support the points made.
- Written in a cohesive manner in full sentences.
- Often extensive in the length of the response.

Limited responses

- Often focused on one or a limited range of ideas.
- Typically, does not provide a balanced response, looking at both sides
- Sometimes failing to provide an answer to the question 'how far do you agree or disagree with the statement?'
- Written as bullet points or a simple list.
- Information is inaccurate or confused.
- Often confusing the concepts of global warming, acid rain and ozone depletion resulting in a lack of clarity within the response and a valid argument.

ENVIRONMENTAL MANAGEMENT

Paper 5014/22 Management in Context
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Key messages

What candidates did well

- Candidates followed the rubric correctly, answering all questions.
- Candidates responded appropriately to the command words and words which indicated the focus and context of each question.
- Candidates showed very good knowledge and understanding of the topics being assessed.
- Candidates were familiar with and used accurate terminology in answers.
- Candidates were able to display extended writing skills when appropriate, linking relevant ideas or developing them fully.
- There was evidence of candidates planning their answers logically.
- Candidates wrote clearly and precisely, avoiding vague words or statements.
- Candidates demonstrated competence in questions requiring the direct application of mathematical processes.
- Candidates presented their solutions well when it was appropriate.

What candidates needed to improve

- Candidates need to read questions more carefully and ensure that they answer the questions asked.
- Candidates need to make sure that they respond correctly to the command word, for example describe, explain, suggest.
- Candidates need to avoid using vague words and terms, such as pollution and resources.
- Candidates need to work to a sufficient degree of accuracy in calculations if required to do so, for example answer to the nearest whole number.
- It is advisable to show full working of calculations.
- Candidates would benefit from further practice in drawing lines of best fit.
- Candidates should make selections clear when circling answers. Crossed-out choices must be obvious.

Comments on specific questions

Question 1

(a) (i) Comprehensive responses

- Many candidates correctly described the change in population with many using comparative data to demonstrate a change.

Limited responses

- Candidates who gave less detailed answers often did not include dates and were unable to pick out the overall trend. Some candidates included data without using it for comparison.

(ii) Comprehensive responses

- Many candidates suggested that using a non-linear scale would be misleading or difficult to interpret.

Limited responses

- Some candidates suggested that such a scale would be inaccurate or show bias.

(b) (i) Comprehensive responses

- Most candidates correctly divided 1.768 by 19 and multiplied by 100.
- Most candidates were able to round their answer to the nearest whole number.

Limited responses

- Some candidates did not give their answer to the nearest whole number.

(ii) Comprehensive responses

- Candidates referred correctly to the evidence in the table and manipulated data successfully.
- Candidates referred to the overall increase and also identified fluctuations.

Limited responses

- Some candidates used data without description or manipulation.
- Some candidates did not include the unit when quoting data.
- Some candidates explained the pattern, discussing migration trends.

(c) (i) Comprehensive responses

- Most candidates used the correct formula for calculating population density.
- Most candidates correctly identified the unit for population density.

Limited responses

- Some candidates used the incorrect data for calculating population density.
- Some candidates assumed the unit for population density was also square kilometres and omitted the people or persons.
- A few candidates thought the unit was million per square kilometre.

(ii) Comprehensive responses

- Many candidates gave a valid reason why an increase in population causes a shortage of drinking water.

Limited responses

- Some candidates misread the stem and discussed other uses of water rather than concentrate on drinking water.

(d) Comprehensive responses

- This question was well answered by candidates who gave two correct reasons for the differences between the two lines. Comprehensive responses discussed high unemployment rates and a lack of skills.

Limited responses

- A small number of candidates described the trend rather than offer explanations.
- A few candidates believed the change was due to migration alone.

(e) Comprehensive responses

- Many candidates showed a good understanding that education can be a strategy for managing human population size, often noting the idea of increased knowledge of family planning and that, by marrying later, people were less likely to have larger families.

Limited responses

- A few candidates gave less precise explanations.

(f) (i) Comprehensive responses

- Many candidates correctly identified the order of strategies using the bar graph as a guide.

Limited responses

- Some candidates were unable to correctly place creating a national park as a suggested strategy.

(ii) Comprehensive responses

- Many candidates gave at least four valid disaster plans.
- Explanations were clear and concise and clearly linked to a plan, with no irrelevant information included.

Limited responses

- Some candidates discussed strategies used before a flood event.

- Some candidates just gave a list of disaster plans.
- Some candidates did not provide sufficient explanation of a plan.

(iii) Comprehensive responses

- Many candidates recognised that flooding could increase crop yield in the long term by depositing silt which is high in nutrients and increases soil fertility.

Limited responses

- Some candidates gave vague answers such as allowing crops to grow better or higher yields are produced.

(iv) Comprehensive responses

- Most candidates gave a relevant suggestion of the impact that over-packaging can have on the environment. Correct suggestions included ideas of an increase in waste, an increase in plastic pollution and visual pollution.

Limited responses

- None seen.

(v) Comprehensive responses

- Many candidates understood what information was needed to allow the results of a survey mentioned in the stem to be compared with a survey repeated a year later. The number of people, the location and time of year the survey was carried out were frequent responses.

Limited responses

- Some candidates suggested how the data could be best displayed.
- Some candidates gave only vague ideas such as asking the same questions or just doing it the same way.

Question 2

(a) Comprehensive responses

- Most candidates gave three appropriate pieces of map evidence in describing the pattern of salinisation.
- Candidates displayed sound skills in using compass directions.
- Common examples in describing the distribution of low salinisation included reference to the north and centre, the international border, the coast and west and east of the country for salinised areas.

Limited responses

- A few candidates used non-compass points descriptors such as above, below, left and right instead of compass directions.

(b) Comprehensive responses

- Most candidates were able to identify three variables controlled in the investigation which had been described in the stem.

Limited responses

- Some candidates were not sufficiently precise. Same soil was listed as a possible variable rather than the more precise soil type.

(c) (i) Comprehensive responses

- Most candidates stated that the reason salt was not added to the water for plant A was because it was the control or was for comparison.

Limited responses

- Some candidates suggested it was to see a difference or to test plant growth without salt water. This was too vague.

(ii) Comprehensive responses

- Most candidates had a solid understanding of the benefit of repeating an investigation. Reasons cited included increasing the validity of results, enabling a trend to be identified and reducing the impact of outliers.

Limited responses

- A few candidates suggested it was to find a mean or it increases accuracy.

(iii) Comprehensive responses

- Many candidates explained that increased salt concentration gives decreased chlorophyll concentration.

Limited responses

- A few candidates stated that the relationship was directly proportional.

(iv) Comprehensive responses

- Many candidates were able to explain that the scientist used chlorophyll concentration to investigate photosynthesis as the chlorophyll absorbs light.

Limited responses

- Some candidates did not include any detail, often just stating it was because of the green pigment or that chlorophyll is needed for photosynthesis.

(v) Comprehensive responses

- Most candidates were able to write the word equation for photosynthesis.

Limited responses

- Some candidates stated incorrectly balanced symbol equations.
- A few candidates mixed symbol equation with words.
- A few candidates mentioned light and chlorophyll in the word equation.

(vi) Comprehensive responses

- Some candidates understood that the method stated in this question was limited by the subjectivity and lack of quantitative data.

Limited responses

- A few candidates stated the method was inaccurate or too time consuming.
- Some candidates used vague ideas such as the fact that numbers were not shown.

(d) Comprehensive responses

- Many candidates identified 4 water sources that could be used for irrigation.

Limited responses

- Some candidates incorrectly identified 2 water sources.
- The most common error was a result of candidates not using the resource provided to full effect.

(e) Comprehensive responses

- Most candidates showed a good understanding of the process of salinisation. Answers discussed the dissolution of salt in the water, the movement of water across the surface into the soil and the accumulation of salt in the soil.
- Some candidates developed their answers and used terminology such as leaching and infiltration.

Limited responses

- Some candidates wrote briefly and did not fully explain why adding salt to roads increases the chance of salinisation.
- A common error was not recognising that salt dissolved in snow, ice or water.

(f) (i) Comprehensive responses

- Most candidates stated the correct process.

Limited responses

- Common examples of incorrect responses include boiling, evaporation, heating and filtration.

(ii) Comprehensive responses

- Many candidates used the information to correctly complete the calculation.

Limited responses

- None seen.

(iii) Comprehensive responses

- Most candidates understood why poorly managed desalination can cause a loss of biodiversity. Common correct answers included the idea of toxic waste, disruption of the food chain and the migration of fish.

Limited responses

- A few candidates repeated information from the stem, such as increase in salt concentration.

(iv) Comprehensive responses

- Many candidates recognised two advantages of floating desalination plants such as the use of renewable resources, less emissions of greenhouse gases and less noise and visual pollution.

Limited responses

- A few candidates did not fully develop their suggestions, stating that such plants do not need a lot of energy or mentioning the coast as unqualified.

(g) Comprehensive responses

- Many candidates used the photograph to correctly identify reasons for the falling water level.

Limited responses

- A few candidates incorrectly discussed reasons for rising water levels.

(h) Comprehensive responses

- Many candidates referenced water polluted by toxic substances, the presence of disease, visual pollution and unpleasant smells.

Limited responses

- A few candidates discussed the impacts of eutrophication such as reduced oxygen content or used vague ideas such as reduced water quality.

(i) (i) Comprehensive responses

- Most candidates extracted the data from the table to give the correct answer of 2.

Limited responses

- A few candidates circled 9.6 demonstrating an incomplete understanding of an anomalous point.

(ii) Comprehensive responses

- Most candidates produced high quality graphs with a fully labelled y-axis, sensible linear scales, accurate plots and a curve of best fit.

Limited responses

- Common errors included missing labels on the axis, and selecting scales that only used a small part of the axes.
- Some candidates incorrectly drew the curve of best fit and in many cases, the points were joined together by a line.

(iii) Comprehensive responses

- This question was well answered by most candidates who gave 4 correct words to complete the sentences about eutrophication.
- Most candidates had a complete understanding of the process of eutrophication and how it leads to loss of oxygen.

Limited responses

- Some candidates used vague terms such as feed on, consume or eat when the correct term required was decompose.
- Some candidates used respire when the correct term required was photosynthesis.

Question 3

(a) (i) Comprehensive responses

- Many candidates demonstrated a sound knowledge of the potential impact of tourism on the Carpathian Mountain ecosystem. Correctly stated reasons included air pollution, litter and the disturbance of animals.

Limited responses

- A few candidates repeated ideas stated in the stem – loss of habitat and loss of biodiversity.

(ii) Comprehensive responses

- Most candidates stated three impacts of deforestation, other than loss of habitat and loss of biodiversity.

Limited responses

- A few candidates mentioned more carbon dioxide or a reduction in oxygen rather than develop the idea that trees are a carbon store and sink.

(b) Comprehensive responses

- Most candidates understood the reasons why brown bear populations are not found in all European countries.
- Common correct answers included hunting, disease, habitat loss and loss of food.

Limited responses

- A few candidates did not state exactly why climate or weather could reduce bear populations.

(c) Comprehensive responses

- Many candidates showed a good understanding of how a biosphere reserve is used to conserve biodiversity, often noting the benefits of the three zones in a reserve. Comprehensive responses linked ideas back to the context of conserving biodiversity.

Limited responses

- Some candidates needed to provide more specific details to their answer.
- Some candidates thought animals in the biosphere reserve were given food and water.
- Some candidates had limited knowledge regarding the differences between the three zones in a biosphere reserve.

(d)(i) Comprehensive responses

- Many candidates demonstrated a very solid understanding of food chains and there were some very strong answers describing what the food chain was showing, including the idea of energy transfer.

Limited responses

- A few candidates did not refer to the resource provided and omitted to mention the various consumers.

(ii) Comprehensive responses

- There were many sensible suggestions.

Limited responses

- Common errors included listing air and soil.

(iii) Comprehensive responses

- This question was well answered by most candidates.

Limited responses

- A common error was linking habitat to the interaction of organisms and non-living components in an environment.