

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

BIOLOGY

Answer THREE of the following questions (you may use diagrams to help)  
All the questions are worth 15 marks

Time allowed: 45 minutes.

1. a) Give the functions of all the following:
    - (i) Cell membrane (1)– controls what exits and enters the cell; semi-permeable
    - (ii) Nucleus (1) – contains chromosomes; store of genetic information
  
  - b) Using a labelled diagram to help, describe how a named animal cell that you have studied is specialised to perform its function (3)  
Suitable diagram (2); description of function related to structure (1)
  - c) Define the term *tissue*; give an example of a named plant tissue (2)  
Group of similar cells performing a function (1); Xylem/Phloem (1)
  - d) Define the terms *diffusion* and *osmosis* (4)  
Diffusion – movement of particles of gases or liquids from high to low concentrations  
Osmosis – movement of water; from high to low water potential (or eq); across a semi permeable membrane (4)
  - e) Write concisely about red blood cells (4 marks)  
Contain haemoglobin; carry oxygen; no nucleus; biconcave shape/eq; large SA:Vol (4)
- 
2. a) Distinguish between the following pairs of terms:
    - (i) Xylem and Phloem (2)  
Xylem – water transport; Phloem sucrose/eq transport (2)
    - (ii) Excretion and Egestion (2)  
Excretion – removal of waste products of metabolism/eq; egestion – removal of undigested food (2)
  - b) Why is it necessary to digest the food that we eat? (3)  
Break down large molecules to small; insoluble to soluble ; so that can be absorbed into blood (3)
  - c) Describe the roles of Bile in the digestion of food (2)  
Neutralises acid food (from stomach)/optimum pH for enzymes; emulsifies fats/eq (2)
  - d) What are the chief differences in structure between bacterial cells and viruses? (2)  
Virus – protein coat, not in bacteria; virus non living/particle, bacteria cell; bacteria cytoplasm , not in viruses/eq (2)
  - e) Write concisely about photosynthesis (4 marks)  
Correct equation; involvement of light energy; chlorophyll; role of photosynthesis in food chains (4)

3. a) Distinguish between the following pairs of terms:
- (i) Gas Exchange and Respiration (2)  
GE – air/gases in and out/eq; respiration chemical reaction in cells/eq (2)
  - (ii) Phenotype and genotype (2)  
P – expression of genes/eq; G – genes/alleles for characteristic (2)
- b) How does photosynthesis and respiration in green plants vary over a 24 hour period? (3)  
Night – R as normal, no P; Day – hi P , R as normal; Idea that R continues 24/idea of changing P with light intensity (3)
- c) Describe the role of a named microorganism in the cycling of Carbon (2)  
Bacterium/fungus; decomposition (2)
- d) Explain the significance of the following statement: “A top carnivore such as a lion ultimately relies on the activity of primary producers”(2)  
Describes food chain; role of producer (2)
- e) Write concisely about temperature regulation in mammals (4 marks)  
Hypothalamus; thermoreceptors; negative feedback/homeostasis; example of response – max 2 (4)
4. a) What do you understand by the term enzyme? (2)  
Biological catalyst; speeds up rate of reaction;protein; shape (2)
- b) Describe an experiment by which you could demonstrate the effect of temperature on the activity of a named enzyme (4)  
DV – measurement; CV’s – max 2; Practical detail; IV – range of temps (4)
- c) Why is it necessary for living organisms to get rid of waste materials? (1)  
Toxic effects on cells (1)
- d) Distinguish between the following terms:
- (i) Gamete and Zygote (2)  
Haploid cell/sperm, egg etc; fertilised gamete/diploid cell (2)
  - (iii) Chromosome and Gene (2)  
Idea that chromosome is the larger, made of DNA; gene is a section of a chromosome/codes for protein (2)
- e) Write concisely about variation in organisms (4 marks)  
Phenotype determined by Environment and Genes; Continuous; Discontinuous; meiosis leads to variation; alleles (4)
5. a) Compare and contrast communication in an organism by Hormones and Nerve Cells (3)  
H – slower, N faster; H – longer term, N – short term; H –chemical, N – electrical; H in blood, N in nerve cells (3)
- b) Name a mammalian hormone, its site of production and describe its effect (3)  
H ; Organ; Effect (3)
- c) Outline the sequence of events that occurs when a person withdraws their hand when they touch a very hot object (4)  
Stimulus; receptor; sensory neurone; CNS; relay neurone; motor neurone; effector/muscle; response (4)
- d) Distinguish between the terms:Diffusion and Active Transport (2)  
D – Hi to Lo, AT – Lo to high; D – passive, eq, AT – energy required (2)
- e) Write concisely about anaerobic respiration in mammals (3 marks)  
No oxygen; correct equation (words); less energy than aerobic (3)
6. a) Distinguish between how Bacteria and Viruses make us feel ill (2)

V in host cells, B generally not; Viruses reproduce in cells and damage them, bacteria release toxins (2)

b) Describe the roles of a named type of cell in the defence of the body against disease (2)

Phagocyte; engulfs; OR Lymphocyte; antibodies (2)

c) State 2 types of natural defences that the human body has against the possible entry of pathogens (disease causing organisms) (2)

Skin – barrier; Mucus; HCl in stomach; Enzymes in tears; blood clotting (2)

d) Distinguish between the following terms:

(i) Sexual and Asexual reproduction (2)

S - Gametes and fertilisation, A – no fertilisation; A – clones, S – genetic variation; A – one parent, S – two parents (2)

(iii) Meiosis and Mitosis (2)

Mit – 2 daughters, Meio – 4; Mit – clones, Meio – variation; Mit – growth eq, Meio – gametes (2)

e) Write concisely about the uptake of water and minerals by plants (5 marks)

Root hair cell; osmosis; xylem; evaporation from leaves; stomata; transpiration (5)

A	75%	The student demonstrates an excellent knowledge and understanding of all the Biological topics assessed.
B	65%	The student demonstrates a good knowledge and understanding of the majority of Biological topics assessed.
C	55%	The student demonstrates a fair knowledge and understanding of the Biological topics assessed.
D	45%	The student demonstrates a reasonable knowledge and understanding of several of the Biological topics assessed.
E	35%	The student demonstrates a reasonable knowledge and understanding of some of the Biological topics assessed.

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

CHEMISTRY

A 80%

The student demonstrates an excellent knowledge and understanding of all the chemical topics assessed.

B 70%

The student demonstrates a good knowledge and understanding of the majority of chemical topics assessed.

C 60%

The student demonstrates a fair knowledge and understanding of the chemical topics assessed.

D 50%

The student demonstrates a reasonable knowledge and understanding of several of the chemical topics assessed.

E 40%

The student demonstrates a reasonable knowledge and understanding of some of the chemical topics assessed.

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

THEOLOGY PAPER

Level	AO1	Mark	AO2	Mark
7	A thorough treatment of the topic within the time available. Information is accurate and relevant, and good understanding is demonstrated through use of appropriate evidence / examples.	28-30	A well-focused, reasoned response to the issues raised. Different views are clearly explained with supporting evidence and argument. There is some critical analysis. A process of reasoning leads to an appropriate evaluation.	14-15
6	A fairly thorough treatment within the time available; information is mostly accurate and relevant. Understanding is demonstrated through the use of appropriate evidence /example(s).	24-27	A mostly relevant, reasoned response to the issues raised. Different views are explained with some supporting evidence and argument. A conclusion is drawn which follows from some of the reasoning.	12-13
5	A satisfactory treatment of the topic within the time available. Key ideas and facts are included, with some development, showing reasonable understanding through use of relevant evidence/example(s).	20-23	A partially successful attempt to sustain a reasoned argument. Some attempt at analysis or comment and recognition of more than one point of view. Ideas adequately explained.	10-11
4	A generally satisfactory treatment of the topic within the time available. Key ideas and facts are included, showing some understanding and coherence.	15-19	A limited attempt to sustain an argument, which may be one-sided or show little ability to see more than one point of view. Most ideas are explained.	7-9
3	A summary of key points. Limited in depth or breadth. Answer may show limited understanding and limited relevance. Some coherence.	10-14	A basic attempt to justify a point of view relevant to the question. Some explanation of ideas and coherence.	5-6
2	A superficial outline account, or an informed answer that misses the point of the question.	5-9	A superficial response to the question with some attempt at reasoning.	3-4

# SIXTH FORM SCHOLARSHIP SAMPLE MARK SCHEME

## DESIGN AND TECHNOLOGY

### Question 1. Product Analysis (HPS 20)

#### Function

Excellent understanding of how the product works with explanations related to performance criteria.	<b>3</b>
Good understanding of how the product works with explanations that are relevant.	<b>2</b>
Some understanding of how the product is expected to work.	<b>1</b>

#### User needs

Excellent understanding of who the product is designed for and explanations related specifically to the environment and applications.	<b>3</b>
Good understanding of who the product is designed for with some explanation related to the application and/or the environment.	<b>2</b>
Some understanding of who the product is designed for and an effort to justify their choice.	<b>1</b>

#### Materials

Appropriate materials identified for at least three components with clear justification of the properties directly related to the product's use.	<b>3</b>
Materials identified for at least two components with some justification of the properties related to the product's use.	<b>2</b>
A material identified with some effort to justify its use.	<b>1</b>

#### Production

Appropriate manufacturing methods identified for at least three components with clear justification of an appropriate scale of production.	<b>3</b>
Manufacturing methods identified for at least two components with some justification of an appropriate scale of production.	<b>2</b>
A manufacturing method identified with an effort to justify a scale of production.	<b>1</b>

### **Ergonomics**

Clear understanding of the term ergonomics applied directly at least two aspects of the product.	<b>3</b>
Some understanding of the term ergonomics applied to a part of the product.	<b>2</b>
Vague understanding of the term ergonomics.	<b>1</b>

### **Aesthetics**

Clear understanding of the term aesthetics applied directly at least two aspects of the product.	<b>3</b>
Some understanding of the term ergonomics applied to a part of the product	<b>2</b>
Vague understanding of the term ergonomics.	<b>1</b>

### **Safety**

Good understanding of relevant safety standards and issues as applied directly to this product.	<b>2</b>
Some understanding of safety issues related to the product.	<b>1</b>

## Question 2. Design (HPS – 25)

### Creativity

Comprehensive, imaginative and feasible ideas that fulfil both specification points.	<b>9-10</b>
Varied range of imaginative and feasible ideas that could fulfil both specification points.	<b>7-8</b>
Adequate range of feasible ideas with some imagination that take into account both specification points.	<b>5-6</b>
Limited range of feasible ideas, little imagination that consider one of the specification points.	<b>3-4</b>
Simple ideas, lack of imagination, little reference to the specification.	<b>0-2</b>

### Technical understanding

Simple ideas, lack of imagination, little reference to the specification.	<b>5</b>
Competent use of appropriate technical language with reference to sizes, materials and manufacturing processes.	<b>4</b>
Good use of appropriate technical language with reference to sizes, materials and manufacturing processes.	<b>3</b>
Limited use of appropriate technical language with reference to materials and manufacturing processes.	<b>2</b>
Little use of technical language with reference to materials and/or manufacturing processes.	<b>1</b>

### Communication

Very good level of communication and presentation, including very good range of drawing techniques used to convey details of designing and making. Moderately complex ideas expressed clearly and fluently in a reasonably structured and relevant manner with only occasional errors of grammar, punctuation and spelling.	<b>9-10</b>
Good level of communication and presentation with a good range of drawing techniques used to convey the details of designing and making. Straightforward ideas expressed clearly with some errors of grammar, punctuation and spelling but not sufficient to suggest a weakness in these areas.	<b>7-8</b>
Sound level of communication and presentation with a range of drawing techniques used to convey the details of designing and making. Ideas expressed clearly with enough errors of grammar, punctuation and spelling to indicate a weakness in these areas.	<b>5-6</b>
Weak level of communication and presentation with a limited range of drawing techniques used to convey the details of designing and making. Simple ideas expressed clearly with errors of grammar, punctuation and spelling indicating a weakness in these areas.	<b>3-4</b>
Evidence of communication and presentation at basic level with some attempt to convey the details of designing and making. Some attempt made to express ideas with significant errors of grammar, punctuation and spelling suggesting major weaknesses in these areas.	<b>0-2</b>

# AMPLEFORTH COLLEGE

## SIXTH FORM SCHOLARSHIP PAPER

### SPECIMEN MARK SCHEME

#### English

##### **21-25 marks: Grade A (≥ 84%)**

To achieve a **Grade A**, a student will be able to:

- understand and communicate complex information, and select what is relevant for specific purposes.
- understand and evaluate subtle facts, ideas and opinions.
- present material in a clearly structured, sequenced, developed and detailed way.
- describe and analyse experience, expressing effectively what is felt and what is imagined.
- recognise implicit meanings and attitudes of a writer, and the means by which they have been conveyed.
- show a strong sense of audience and an understanding of appropriate uses of language for different purposes.
- write in well-constructed paragraphs, using a full range of appropriate sentence types, and a wide and mature vocabulary.
- demonstrate a high degree of accuracy in use of grammatical structures, spelling and punctuation.

##### **16-20 marks: Grade B (≥ 64%)**

Work produced to the standard of a 'B' grade will display some, but not all, of the qualities of an 'A' grade response.

##### **11-15 marks: Grade C (≥ 44%)**

To achieve a **Grade C**, a student will be able to:

- understand and communicate information, sometimes at a complex level and select what is relevant for specific purposes.

- understand and reflect on facts, ideas and opinions.
- present material in a structured and coherent way, with some development and use of detail.
- describe and reflect upon experience, expressing appropriately what is felt and what is imagined.
- recognise the more obvious implicit meanings and attitudes of a writer, and the general effects conveyed.
- show a sense of audience and an awareness of appropriate uses of language for different purposes.
- write in paragraphs, using a variety of sentence types and a varied vocabulary.
- demonstrate accuracy in use of grammatical structures, spelling and punctuation.

**6-10 marks: Grade D (≥ 24%)**

Work produced to the standard of a 'D' grade will display some, but not all, of the qualities of a 'C' grade response.

**1-5 marks: Grade E (≥ 4%)**

To achieve a **Grade E**, a student will be able to:

- understand and communicate information at a straightforward level, and select what is relevant for specific purposes.
- understand and describe basic facts, ideas and opinions.
- present material with some sense of order and coherence.
- describe experience in concrete terms, expressing intelligibly what is felt and what is imagined.
- recognise clear meanings and explicit attitudes of a writer, and comment on them at a literal level.
- show awareness that language is used in different ways in different circumstances.
- write in accurate, simple sentences, using a basic vocabulary.
- demonstrate accuracy in simple grammar usage, spelling and punctuation.

**0 marks: No Grade**

Work produced which receives no grade is either wholly unsuited to the task or too limited in content for a grade to be accurately awarded.

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

FRENCH

**Content**

13-15 An excellent response which is fully relevant and detailed, conveying a lot of information. Communication is clear with little or no ambiguity.

Opinions are expressed and justified.

10-12 A very good response which is almost always relevant and which conveys a lot of information. Communication is mostly clear but there are a few ambiguities. Opinions are expressed and justified.

7-9 A good response which is generally relevant with quite a lot of information conveyed. Communication is usually clear but there are some ambiguities. Opinions are expressed and may be justified.

4-6 A reasonable response with some relevant information conveyed. Communication is sometimes clear but there may be instances where messages break down. An opinion is expressed.

1-3 A basic response which conveys a limited amount of relevant information. Communication may not be clear and there are instances where messages break down. An opinion may be expressed.

0 The content does not meet the standard required for Level 1 at this tier.

**Range of Language**

10-12 Very good variety of appropriate vocabulary and structures. More complex sentences are handled with confidence, producing a fluent piece of coherent writing. The style and register are appropriate.

7-9 Good variety of appropriate vocabulary and structures. More complex sentences are regularly attempted and are mostly successful, producing a mainly fluent piece of coherent writing with occasional lapses. The style and register are appropriate.

4-6 Some variety of appropriate vocabulary and structures. Longer sentences

are attempted, using appropriate linking words, often successfully. The style and register may not always be appropriate.

1-3 Little variety of appropriate vocabulary. Structures are likely to be short and simple. Little or no awareness of style and register.

0 The range of language produced does not meet the standard required for Level 1 at this tier.

### **Accuracy**

5 Accurate, although there may be a few errors especially in attempts at more complex structures. Verbs and tense formations are secure.

4 Generally accurate. Some minor errors. Occasional major errors, usually in attempts at more complex structures. Verbs and tense formations are nearly always correct.

3 Reasonably accurate. There are likely to be minor errors and there may be some major errors, not only in complex structures. Verb and tense formations are usually correct.

2 More accurate than inaccurate. The intended meaning is generally clear. Verb and tense formations are sometimes correct.

1 There may be major errors and frequent minor ones, and the intended meaning is not always clear. There is only limited success with verb and tense formations.

0 The accuracy does not meet the standard required for Level 1 at this tier.

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

GEOGRAPHY

Answer ONE of the following questions.

Time allowed: 45 minutes.

1. a) Explain the natural causes of climate change.  
b) Explain why action needs to be taken at different scales to reduce the rate of global warming.
2. a) For a named ecosystem, explain its importance for human wellbeing.  
b) Examine the range of local and global threats to this ecosystem.
3. a) Describe and explain the distribution of the world's tectonic hazards.  
b) Explain why earthquake events can have varying consequences.
4. a) Describe and explain how advances in transport and technology have contributed to a 'shrinking world' for many people.  
b) Explain how people can manage the environmental and social costs of globalisation for a better world.
5. a) Describe and explain the range of policies a country may adopt to address population issues.  
b) Examine the benefits and costs that immigration may bring to a country.
6. a) Describe and explain the factors that could lead to an increased risk of river flooding.  
b) Explain how different strategies can be used to reduce the impact of flooding.

Candidates are encouraged to draw on case study examples of places they have studied whenever possible. Illustrations such as graphs, diagrams, and sketches are permitted

Mark scheme

<p>a) Explain the natural causes of climate change.</p>	<ul style="list-style-type: none"> <li>• Earth orbit / Milankovitch cycles with details of changed circular to elliptical orbit ; axial tilt cycle</li> <li>• Solar output variation e.g. sun spot activity follows irregular warming cycle that lasts about 11 years and longer cycles (Maunder)</li> <li>• Major volcanic eruptions leading to a brief global cooling due to ash and dust particles being ejected high into the atmosphere, e.g. 1883 Krakatoa</li> <li>• Cosmic collision e.g. dinosaur mass extinction</li> <li>• El Nino / La Nina (short-term changes) and any located extension of this idea</li> </ul>
<p>b) Explain why action needs to be taken at different scales to reduce the rate of global warming.</p>	<p><b>Needs to be taken</b> – evidence suggests we cannot continue to rely on existing fossil fuels and hope to reduce global warming</p> <p>Action: expect reference to mitigation strategies, which take action to reduce how much climate change occurs.</p> <p><b>Different scales -</b></p> <p>May quote ‘think global, act local’ rationale          No mitigation technology is universally appropriate/possible/cheap//reliable/popular          As such a range will be needed for most societies, introduced across a range of scales for action.          Give credit to reference made to a range of mitigation strategies e.g.</p> <ul style="list-style-type: none"> <li>• global agreements</li> <li>• alternative energy technologies/energy conservation</li> <li>• ethical consumerism</li> <li>• waste strategies</li> <li>• Modified agricultural practices</li> </ul> <p>Better answers will recognise the fact that geographical contexts and scales vary and that no single ‘silver bullet’ solution yet exists</p>
<p>a) For a named ecosystem, explain its importance for human wellbeing.</p>	<p>Global ecosystems include coral reefs, any type of forest or grassland, and oceans. There should be some reference to a chosen biome rather than simply one location.          Goods might tend to be seen as more locally important, whereas services might be more global, but it will depend on the ecosystem chosen.</p> <p><b>Services might include:</b></p> <ul style="list-style-type: none"> <li>· Flood control / coastal protection</li> <li>· Carbon sequestration</li> <li>· Climate regulation</li> <li>· Cultural / aesthetic services (linked to tourism)</li> </ul> <p><b>Goods could be:</b></p> <ul style="list-style-type: none"> <li>· Food (hunting, fishing)</li> <li>· Building materials, timber</li> <li>· Genetic material for crops / medicines</li> <li>· Cultural goods</li> </ul> <p>Be wary of goods that involve the destruction of the ecosystem in question, e.g. HEP dams, mining etc. as these actually value land not the ecosystem which is destroyed.          Expect specific links to the chosen ecosystem plus an assessment of importance for human wellbeing</p>
<p>b) Examine the range of local and global threats to this ecosystem.</p>	<p>Answers will need to focus on threats at both scales; local might include a small area / named ecosystem.          Global threats are likely to focus on global warming and its consequences, but could include over-fishing /deforestation in a global context.          Local threats could take the form of:</p> <ul style="list-style-type: none"> <li>• <b>Deforestation</b> – Amazonia and many other areas, for timber, cattle ranching, mineral exploitation; might be seen as a major threat as it is widespread in some areas and leads to</li> </ul>

	<p>complete destruction in some cases on the other hand it can be managed. Includes mangroves and conversion to farmland / aquaculture.</p> <ul style="list-style-type: none"> <li>• <b>Tourism and Recreation</b> – especially in marine areas e.g. coral reefs; localized in some cases and can be managed e.g. St Lucia MMA, or have a positive impact in terms of funding conservation e.g. Great Barrier Reef.</li> <li>• <b>Overfishing</b> – (and other forms of exploitation beyond sustainable yield) can cause food webs to collapse e.g. Grand Banks, but in some cases is being managed.</li> <li>• <b>Pollution / eutrophication</b> – from sewage and farm runoff.</li> <li>• <b>Invasive alien species</b> – such as the Chinese Mitten crab, or rats / goats in the Galapagos</li> <li>• <b>Hazards</b> – tropical cyclones destroying reefs; wildfires.</li> <li>• There are others including urbanisation and industrial development; conversion to farmland.</li> </ul> <p>Global threats could include:</p> <ul style="list-style-type: none"> <li>• <b>Global warming</b> leading to rising temperatures / changing rainfall patterns – increased stress on forests and other ecosystems; latitudinal shifts / changing migration patterns – Arctic and obvious example.</li> <li>• <b>Rising sea levels</b> affecting coastal wetlands and coral reefs; increased <b>ocean temperatures</b> leading to widespread bleaching; impact of ocean acidification.</li> <li>• <b>Desertification</b> encroaching on grasslands and savannahs; linked to global warming but also local threats such as overgrazing, poor farming practice.</li> <li>• <b>Global pollution issues</b> – such as acid rain, which is widespread, or marine pollution and waste.</li> </ul> <p>Both a marine and terrestrial biodiversity focus is acceptable.</p>
<p>a) Describe and explain the distribution of the world's tectonic hazards.</p>	<p><b>Tectonic</b>– volcanic, earthquakes – and possibly landslides, tsunami.</p> <p><b>Distribution</b> – tectonic hazards can be explained in relation to plate boundaries and volcanic hot spots. Mass movements are harder to generalise about – many occur in geologically young and tectonically active mountains (or links could be made with storm / hurricane belts as trigger).</p> <p><b>Hazards</b> – some candidates will choose to additionally describe and explain the human dimensions of the distribution.</p> <p><i>Centre approaches to teaching this topic may vary. Some candidates will deliver essentially a 'physical geography' essay; others will emphasise the overlap between population distribution patterns and boundary hazard patterns (and will as result have less to say about convection cells and slab pull, etc.). Either approach is acceptable.</i></p>
<p>b) Explain why earthquake events can have varying consequences</p>	<p><b>Earthquake events</b> – expect reference to specific real world events to illustrate geographical points made.</p> <p><b>Varying consequences</b> - Ideas linked to differing levels of economic or human development (LDC vs MDC).</p> <p>Discussion of the 3Ps – Prediction, Preparation and Protection.</p> <p>Expect reference to level of vulnerability of populations. May reference the disaster risk equation.</p> <p>Other points: Magnitude, depth of focus, rural vs urban, population density, time of day.</p>
<p>Describe and explain how advances in transport and technology have contributed to a 'shrinking world' for many people</p>	<p>Allow for a definition of 'shrinking world' or 'globalisation'.</p> <p>Explains role of aeroplanes in reducing travel time promoting global tourism or air-freight of perishable goods. Aeroplanes make it possible to travel world more quickly e.g. low-cost airlines / jets. Growth of global hub airports, e.g. Heathrow create network of trickle down subcontracting e.g. LSG SkyChefs</p> <p>Instantaneous connectivity achieved via telegraph, telephone and internet</p> <p>Container shipping vital for trade flows of manufactured goods e.g. China-UK</p> <p>Sailing ships made it easier to cross Atlantic</p> <p>High-speed rail links e.g. Eurostar have grown in importance, allowing cheap/easy access</p> <p>Global 'messaging' by TNCs so sense of global village develops</p> <p>Internet enables personal information flows (photos, news) and can create social networks (Facebook/Twitter) May link to migrants staying in touch with family online shopping.</p>

	For full credit, transport and technology should be linked to idea of changing speed of travel / heightened sense of nearness / other shrinking world ideas (time-space compression).
Explain how people can manage the environmental and social costs of globalisation for a better world.	<p>‘For a better world’ implies a moral dimension for top answers</p> <p><b>Environmental</b>  Trading Carbon credits/international agreements e.g. Kyoto/COP21 where countries are set carbon emissions limits  Businesses can label products with transport distance information – leading to changing shopping habits and the reduction in food miles.  Recycling as a way of reducing landfill</p> <p><b>Social</b>  Ethical consumerism  Fair trade – consumers may choose fair trade products in the belief that their purchases improve the wages and living conditions of farmers and their families in the developing world.  Buying local – helping to support local employment, reducing food miles and pre-empting the need for excess packaging.</p> <p>Expect details of specific practices and strategies and reference to named examples in support of explanations.</p>
Describe and explain the range of policies a country may adopt to address population issues.	<p>Population issues may an ageing population, declining population or rapidly growing population. Answers are likely to include detail of either/both anti-natalist/pro-natalist policies as well as migration policies.  Better answers will clearly link aspects of each policy to a specific population issue.  Expect reference to specific countries and/or policies to illustrate points made.  Countries referenced are likely to include China (one child policy), France (Code de la Famille) and the UK (migration), although credit other sensible examples.</p>
Examine the benefits and costs that immigration may bring to a country.	<p>Expect a range of economic and social benefits and costs.</p> <p><b>Benefits</b>  Most international immigrants are young adults and tax payers of working age.  Take low paid but essential jobs that are often unattractive to the indigenous workforce  Smaller immigrant streams, mainly from USA/Australia/EU comprise highly skilled, highly qualified and highly paid workers  Social positives include cultural melting pot ideas and may offer specifics (e.g. for UK, Spain)  Foreign students contribute to the economy  Retirement migration can have economic benefits for destination areas such as Southern Spain. Retirees are consumers using local services and paying taxes.</p> <p><b>Costs</b>  Pressure on schools, hospitals and other public services due to high fertility and youthful population structures  Migrants and their families may exacerbate problems of housing shortages.  Sunset migration – disproportionate demands on medical and health services  Self-segregation and a desire on the part of some communities to maintain their own culture, language and traditions leads to tensions  Poverty, which forces many ethnic minority groups to cluster in cheap housing areas in inner cities.  Discrimination and perceived threats from the host society</p>
Describe and explain the factors that could lead to an increased risk of river flooding.	<p><b>Meteorological factors:</b>  Prolonged rainfall leading to the saturation of the ground, reduced infiltration, increased surface runoff and river discharge.  Heavy rainfall can lead to rapid surface runoff – flash flooding</p>

	<p>Seasonal factors such as melting snow and ice – or monsoon rainfall.  El Nino/La Nina  Climate change  <b>Other physical factors</b>  Vegetation cover – sparse vegetation reduces infiltration.  Soil type – affecting permeability of the soil  High drainage density – quick drainage leads to short lag times and increased river discharge.  Relief – steep sided valleys increases discharge as water reaches the river channel more quickly.  <b>Human factors</b>  Flood management strategies can increase risk of flooding further downstream.  Land use changes such as urbanisation, deforestation and changing agricultural practices can affect levels of ground permeability, infiltration, runoff.  In better answers, expect reference to case study material to illustrate points.</p>
<p>b) Explain how different strategies can be used to reduce the impact of flooding.</p>	<p><b>Short term responses:</b>  Flood warning systems, such as that run by the Environment Agency (warnings can be accessed by telephone, mobile-phones, e-mail and texts) allow people to prepare.  People in areas at high flood risk can evacuate to higher ground, move belongings, install temporary flood gates/sand bags etc.  <b>Long term-responses:</b>  Compensation through flood insurance for damage to belongings and property  Flood hazard maps and assessment of risk can be used for future planning  Restriction of development on floodplains and other areas of high flood risk e.. Land use zoning.  Soft engineering strategies can be used to slow the pathway of rainwater into river channels.  Hard engineering structures can be used to regulated river flow e.g. Foss barrier.</p>

Grade Descriptors

A	<p>A structured, detailed or wide-ranging account covering all aspects of the question. Accurate and appropriate use of geographical terminology and exemplification to illustrate understanding. Written language errors are rare. Applied assessment and or evaluative comments may be evident at the highest level. May provide a concluding statement or overview.</p>
B	<p>A structured explanation covering a variety of geographical points in answer to the question. Descriptive language is precise and explanations are always clear. Accurately uses some appropriate terms and examples to demonstrate a good understanding of the question or issue.</p>
C	<p>Structure is satisfactory. A mainly descriptive account or one that only partially answers the question, although points mainly accurate. Explanations are clear, but there are some areas of less clarity. Answer may lack balance. Some geographical terminology is used with some accuracy. There are some written language errors.</p>
D/E	<p>Poor or absent structure. The answer identifies a limited range of points or explanations are vague/generic in nature. Descriptive language is basic. Explanations are over simplified and lack clarity. Geographical terminology is rarely used. There are frequent written language errors.</p>

# AMPLEFORTH COLLEGE

## SIXTH FORM SCHOLARSHIP PAPER

### SPECIMEN MARK SCHEME

#### German

- ❖ Content *(how much information do you get across to the reader?)*
- ❖ Range & complexity *(do you use a wide range of vocab and grammar?)*
- ❖ Accuracy *(how many errors do you make in spelling, grammar, etc.?)*

Mark	CONTENT
13-15	<b>Very Good</b> Fully relevant and detailed response to the task. Sound ability to convey a lot of information clearly, express and explain ideas and points of view. Well organised structure.
10-12	<b>Good</b> Mostly relevant response to the task and shows ability to convey a lot of information clearly, express and explain ideas and points of view.
7-9	<b>Sufficient</b> Response to the task is generally relevant with quite a lot of information clearly communicated. Points of view are expressed and ideas are developed.
4-6	<b>Limited</b> Limited response to the task with some relevant information conveyed. Simple opinions are expressed and there is some development of basic ideas.
1-3	<b>Poor</b> Very limited response to the task with little relevant information conveyed. No real structure.

<b>0</b>	The answer shows no relevance to the task set. A zero score will automatically result in a zero score for the answer as a whole.
----------	---

<b>Mark</b>	<b>RANGE &amp; COMPLEXITY</b>
<b>9-10</b>	<b>Wide variety</b> of appropriate <b>vocabulary</b> and <b>structures</b> . <b>More complex sentences</b> are handled with confidence and <b>verb tenses are used successfully</b> .
<b>7-8</b>	<b>Good variety</b> of appropriate <b>vocabulary</b> and <b>structures</b> used. <b>More complex sentences</b> are attempted and are mostly successful.
<b>5-6</b>	<b>Some variety of vocabulary and structures</b> used, including <b>attempts at longer sentences</b> using appropriate <b>linking words</b> which are sometimes successful.
<b>3-4</b>	Vocabulary is appropriate to the <b>basic</b> needs of the task. <b>Structures are mostly simple</b> .
<b>1-2</b>	<b>Incorrect vocabulary</b> with <b>little understanding</b> of language structure.
<b>0</b>	No language produced which is worthy of credit.

<b>Mark</b>	<b>ACCURACY</b>
<b>5</b>	Largely accurate, although there may still be some errors especially in attempts at more complex sentences. <b>Verbs and tense formations are secure</b> .
<b>4</b>	Generally accurate with errors occurring in attempts at more complex sentences. <b>Verb and tense formations are usually correct</b> .
<b>3</b>	More accurate than inaccurate. <b>Verb forms and tense formations are sometimes unsuccessful</b> . The <b>intended meaning is clear</b> .
<b>2</b>	<b>Many errors</b> which <b>often impede communication</b> . <b>Verb forms are rarely accurate</b> .
<b>1</b>	Limited understanding of the most basic linguistic structures. <b>Frequent errors regularly impede communication</b> .
<b>0</b>	No language produced which is worthy of credit.

## GRADE DESCRIPTIONS

<b>Grade</b>	<b>Description</b>
<b>A</b>	Candidates write for different purposes and contexts about real or imaginary subjects. They express and explain ideas and points of view. They use a variety of vocabulary, structures and verb tenses. Their spelling and grammar are generally accurate. The message is clear but there may be some errors, especially when they write more complex sentences.
<b>C</b>	Candidates write for different contexts that may be real or imaginary. They communicate information and express points of view. They use a variety of structures and may include different tenses or time frames. The style is basic. They convey a clear message but there may be some errors.
<b>F</b>	Candidates write short texts that relate to familiar contexts. They can express simple opinions. They use simple sentences. The main points are usually conveyed but there are mistakes in spelling and grammar.

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

HISTORY

Examiners are instructed to use 'best fit' to identify the correct Level, then to place the answer in the middle of the Level, then to go up or down within that Level according to the qualities/features of the answer.

Level	
Level 5 41-50 marks	<p>Answer has a consistent structure and focus appropriate to question. It will address more than one side of the issue if appropriate. It may include (but does not have to) 'unexpected but plausible and justifiable' points relevant to the question. The approach will be wholly analytical and focused on the question.</p> <p>Factual support is detailed, accurate and relevant – most of the main points/examples that could reasonably be expected in such an essay are included and used appropriately.</p> <p>Answer has very convincing substantiation.</p>
Level 4 31-40 marks	<p>Answer has a consistent structure and focus appropriate to question. It will address more than one side of the issue if appropriate. The approach will be largely analytical and focused on the question; there will be little narrative.</p> <p>Factual support is detailed, accurate and relevant – several of the main points/examples that could reasonably be expected in such an essay are included and used appropriately.</p> <p>Answer has convincing substantiation.</p>
Level 3 21-30 marks	<p>Answer has a structure and focus appropriate to question. It will address more than one side of the issue if appropriate. Narrative parts may be present but the approach will be largely analytical and focused on the question.</p> <p>Factual support is sound and largely accurate – main points/examples that could reasonably be expected are included and used appropriately.</p> <p>Answer has some overall substantiation but it is not fully supported or convincing.</p>
Level 2 16-20 marks	<p>Answer has some structure or focus appropriate to question. It may narrate in large part.</p> <p>Factual support is generally thin and/or has significant inaccuracies.</p> <p>Answer has some basic substantiation but is largely asserted.</p>
Level 1 0-15 marks	<p>Answer has very little structure or focus appropriate to question. It may be a short narrative.</p> <p>Factual support is very thin indeed and/or largely inaccurate.</p> <p>Answer is asserted with no substantiation.</p>

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

LATIN

Question 1 Translation.

50 marks.

Passage divided into ten sections, each worth five marks.

- 5 Correct translation, one small error allowed.
- 4 One serious error or two small errors, otherwise the meaning is conveyed.
- 3 Most of the meaning conveyed, but several errors.
- 2 Half of the meaning conveyed, the rest seriously flawed.
- 1 A minority of meaning conveyed.
- 0 No elements of meaning conveyed, no relation to Latin at all.

Question 2 Comprehension

30 Marks. Marks for each question are on paper.

Grade Boundaries.

A 80%

B 70%

C 60%

D 50%

AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

MATHEMATICS

1 (a) (i)	2.77	A2
(ii)	$-\sqrt{21}/3$	A2
(b) (i)	$(3x - 1)(x + 4)$	A1, A1
(ii)	$x = 1/3, -4$ $y + 1 = 1/3, -4 \quad y = -2/3, -5$	M1 M1, A1
(c)	$(5n + 1)((5n + 1) + 1)$ $= (5n + 1)(5n + 2)$	M1 A1, A1
(d)	Eliminate x or y to get $41x = 123$ or $41y = 287$ $x = 3, y = 7$	M2 A1, A1
(e)	Correctly multiply by 7 and $(x - 1)$ to get $(3x - 4)(x - 1) = 7(x - 1) + 35$ oe simplify to $(3x + 4)(x - 6) = 0$ $x = -4/3, 6$	M2 M2 A1, A1
(f)	$a = k / b^2$ $k = 50$ $a = 0.5$	M1 M1 A1
2	$8 + \sqrt{362 + 252} + 8$ oe $= 59.8$ cm (3 sf) (awrt 59.8)	B2 A1, A1 units (A0 60 cm)
3	If short    side = x, longer    side = $x \sqrt{B/A}$ $h = 2(A + \sqrt{AB}) / x$ oe $A = \frac{1}{2} (x + x \sqrt{B/A})(2(A + \sqrt{AB})) / x$ $= (1 + \sqrt{B/A})(A + \sqrt{AB})$ $= A + 2\sqrt{AB} + B$ $= (\sqrt{A} + \sqrt{B})^2$	M1 M1 M1 M1 M1 A1
4 (a)	$0.3x = 6$ $x = 20$	A1
(b)	$300 \times 1.25$ $= \pounds 375$	A1
(c)	$1.25x = 225$ $x = \pounds 180$	A1

(d)	$x \times 1.25^n = 3x$ $1.25^n = 3$ if $n = 4$ , $1.25^n = 2.44\dots$ if $n = 5$ , $1.25^n = 3.051\dots$ $n = 5$ years	B1  M1  A1
5	$60t = 75(t - 0.25)$ $t = 1.25$ 10:30 am	M1, M2 M1 A1 time A1 am
6	Consecutive therefore even and odd number Even = $2n$ , odd = $2n + 1$ oe $(2n)^2 + (2n + 1)^2$ $= 4(2n^2 + n) + 1$ therefore multiple of 4 + 1 therefore if divided by 4 there is a remainder of 1	M2 A1 A1  A2
7	P(BB) AND P(pick B) $= 0.5 \times 1$ $= 0.5$	B2 (or tree diagram) M1 A2

Total = 60

#### Grades

Mark	Grade
A	50
B	40
C	30
D	20

# SIXTH FORM SCHOLARSHIP EXAMINATION

## SPECIMEN MARK SCHEME

### PHYSICS PAPER

1.

Mass	kg
Length	metre
Current	<u>amps A</u>
Charge	<u>coulomb C</u>
Work done	<u>joule/newtonmetre</u> J or Nm
Momentum	<u>kilogram metre per second</u> kgms <sup>-1</sup> or kgm/s
Potential difference	<u>volt V</u>
Kinetic energy	<u>joule/newtonmetre</u> J or Nm

**½ mark each for each correct answer.**

2. Energy = Power x time = 200 x 240 seconds (4 mins = 240s)  
 = 48000 J  
 = **answer C**

3. Momentum = mass x velocity  
 = 0.150kg x 20                      0.150 kg = 150g as kg.  
 = 3 kgm/s  
 = **answer A**

4. 1000 counts per second      = 1/8 of 8000 counts per second   
     1/8                                      = 3 half-lives have passed   
     = 3 x 10.6 hours = 31.8 hours

5. A = 4; B = 4; C = 4; D = 2.

6. (a) 0.9

1

1.1

*accept the value of  $A_4 + 0.2$*

1

(b)  $V = I R$  or  $12 = 0.6 R$  or  $\frac{12}{0.6} = ?$

accept  $V = A R$   
 $V = I \times \text{ohm's sign}$   
 do not credit Ohm's law triangle

2

$$R = 20$$

correct numerical answer earns both marks

ohms

1

(c)  $A_3 = 0.3$

$$A_4 = 0.3$$

accept the same numeric value as  $A_3$

$$A_5 = 0.5$$

accept the value of  $A_4 + 0.2$

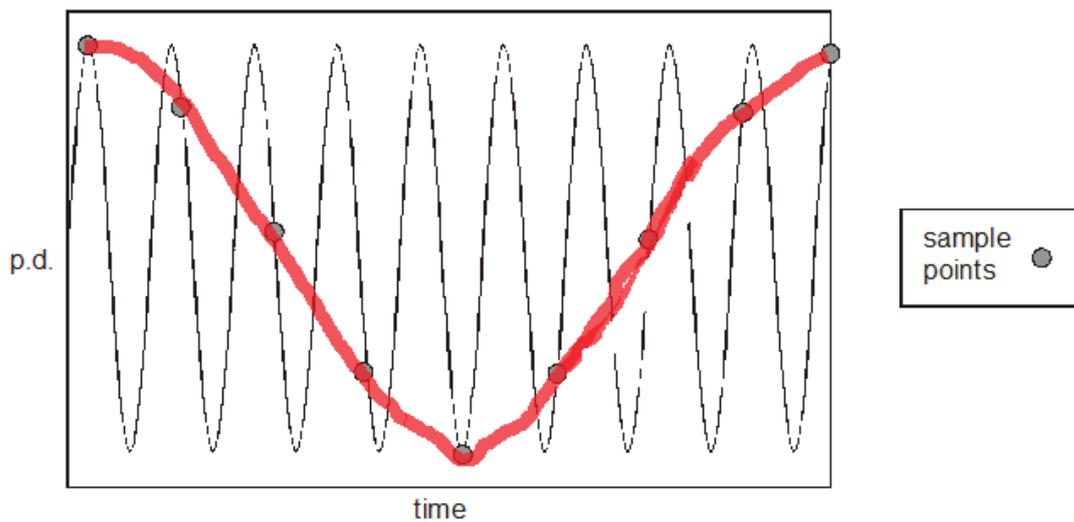
3

[8]

7. a) B see <http://www.hardballtimes.com/the-physics-of-falling-baseballs/>  
b) answer C

8. D, as it is proportionally the greatest source of error/percentage error at 3.3%

9. a)



☑

- b) It will be **lower**, or more bass ☑  
c) Sample more often/frequently or increase the **sampling** frequency ☑

10.

(a)	$a = 3.0/0.80 \checkmark_m = 3.75 \text{ m s}^{-2} \checkmark_e$	2	accept 3.7 - 3.8
(b)(i)	drag force (air resistance) increases (with speed) $\checkmark$	2	
(ii)	so <u>resultant/effective/total force</u> decreases .... $\checkmark$ drag force & forward thrust identified $\checkmark$ resultant force = 0/balanced forces/equal & opposite $\checkmark$	2	take (i) and (ii) together accept 'forces in equilibrium'
(c)(i)	velocity <u>decreases</u> rapidly then at a <u>decreasing rate</u> $\checkmark$ then travels at a <u>constant</u> velocity $\checkmark$	2	
(ii)	drag force (air resistance) becomes <u>greater than</u> thrust $\checkmark$ drag force (again) balances/equal & opposite to thrust $\checkmark$	2	take (i) and (ii) together
	Total	10	

11.

### Planetary Motion

- a) Use of speed = distance / time and distance =  $2\pi r$  [1]  
Correct translation of units to give  $v = 29700 \text{ m/s}$  [1]
- b) Use of  $k = T^2/R^3$  attempted [1]  
to give  $3.00 \times 10^{-19}$  [1]  
with units  $\text{s}^2/\text{m}^3$  [1]  
**Note:** correct values in other units acceptable e.g.  
 $k = 4.03 \times 10^{-20} \text{ days}^2/\text{km}^3$
- c) Use of calculated value of  $k$  or use of ratios attempted [1]  
to give  $T = 691 \text{ days}$  ( $5.97 \times 10^7 \text{ seconds}$ ) [1]  
 $T$  used with  $R$  to give  $v = 24000 \text{ m/s}$  [1]
- d) East to West because Mars is travelling more slowly and appears to fall behind the motion of Earth, therefore its position in the sky appears further to the West each night (or words to that effect).  
Note – mark awarded for correct answer **and** explanation. [1]



AMPLEFORTH COLLEGE  
SIXTH FORM SCHOLARSHIP PAPER  
SPECIMEN MARK SCHEME

SPANISH

<b>+ 16 SCHOLARSHIP-MARK SCHEME</b>	
<b>Content (15 marks)</b>	
13-15	Very Good. Fully relevant and detailed response to the task. Sound ability to convey information clearly, express and explain ideas, opinions and feelings. Well organised structure.
10-12	Good Mostly relevant response to the task and shows ability to convey a lot of information clearly, express and explain ideas, opinions and can convey feelings.
7-9	Sufficient. Response to the task is generally relevant with quite a lot of information clearly communicated. Opinions are expressed and ideas are developed.
4-6	Limited response to the task with some relevant information conveyed. Simple opinions are expressed and there is some development of basic ideas.
1-3	Poor. Very limited response to the task with little relevant information conveyed. No real structure.
0	The answer shows no relevance to the task set. A zero score will automatically result in a zero score for the answer as a whole.
<b>Range Of Language (10 marks)</b>	
9-10	Comprehensive variety of appropriate vocabulary and structures. More complex sentences are handled with confidence and verb tenses are used successfully.
7-8	Good variety of appropriate vocabulary and structures used. More complex sentences are attempted and are mostly successful.
5-6	Some variety of vocabulary and structures used, including attempts at longer sentences using appropriate linking words which are sometimes successful.
3-4	Vocabulary is appropriate to the basic needs of the task and structures are mostly simple.
1-2	Inappropriate vocabulary with little understanding of language structure
0	No language produced which is worthy of credit.
<b>Accuracy (5 marks)</b>	
5	Largely accurate, although there may still be some errors especially in attempts at more complex sentences. Verbs and tense formation are secure.
4	Generally accurate with errors occurring in attempts at more complex sentences. Verb and tense formations are usually correct.

3	More accurate than inaccurate. Verb forms and tense formations are sometimes unsuccessful. The intended meaning is clear.
2	Many errors which often impede communication. Verb forms are rarely accurate.
1	Limited understanding of the most basic linguistic structures. Frequent errors regularly impede communication
0	No language produced which is worthy of credit.

### **Boundaries**

24-30-A

21-23- B

18-20-C

15-17-D

12-14-E

<b>GRADE DESCRIPTORS</b>	
A	Candidates give information and narrate events. They express and justify ideas and opinions. They use a range of vocabulary, structures and verbs/tenses. Their spelling and grammar are generally accurate and their style is appropriate to purpose.
C	Candidates express opinions and write about a variety of topics which may be factual or imaginative and which may include different tenses. The style is basic but despite some errors the writing conveys a clear message.
E	Candidates write short sentences and communicate simple ideas. Although there may be mistakes in spelling and grammar, the main points are usually communicated.