

## Teacher Resource Bank

GCE Geography

Candidate Exemplar Work: GEOG1





## CANDIDATE EXEMPLAR WORK

### GEOG1 – Question 3 Coastal Environments

#### Example P

#### Question 3 – Coastal Environments

12

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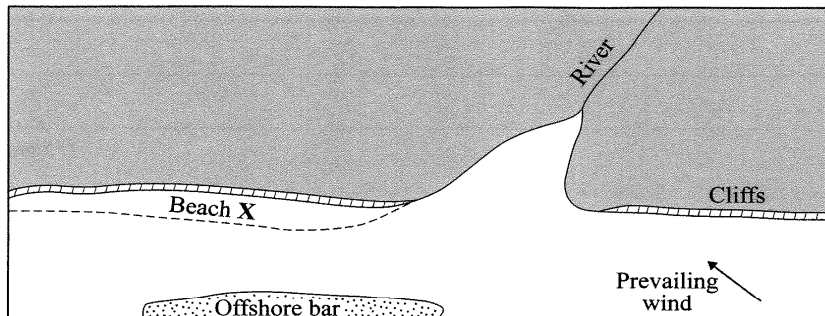
#### 3 COASTAL ENVIRONMENTS

P

Total for this question: 30 marks

- (a) Figure 4 shows part of a coastal system.

Figure 4



- (i) Identify **two** sources of sediment at X.

Source 1 Offshore bar

Source 2 Mud from the river

(2 marks)

- (ii) Outline the role of sub-aerial weathering in shaping the coast.

Sub-aerial weathering can shape the coast by attacking the cliffs. If they are made up of limestone, then the slightly acidic rain water will weather the rock. (Freeze-Thaw could also affect it) as water gets into cracks, it cools, freezes and expands, causing the crack to widen. Sea spray can cause the salty sea crystals to break up rock by disintegration.

(3 marks)

(b) What are the differences between constructive and destructive waves?

① Constructive waves have a (long wavelength of upto 100m). They have a (low height of less than 1m). (They have a fairly low frequency of 6-8 per minute). [The swash is more powerful than the backwash].

② Destructive waves have a (much shorter wave length of around 25m). (They occur more frequently) (10-14 times per minute). They are (more than 1m high) [and have a strong backwash].

③ (4 marks)

(c) Explain the formation of landforms typical of coastlines of emergence.

① An example of a landform typical of coastlines of emergence are (raised beaches, found in Arran) on the West coast of Scotland. They are formed due to isostatic sea level fall.

② The heavy ice had been on the land for many years, and the sheer weight of the ice depressed the land surface. When the glacier retreated, the sea levels rose quickly, and

③ (the beaches were created). As the land began to emerge from the mantle, the sea levels fell, and the beaches became raised. (The

④ land will continue to rise until it returned to how it was before the glacier.) (6 marks)

Question 3 continues on the next page

- (d) With reference to **one or more** case study of coastal management, discuss whether the benefits outweigh the costs.

- ① The area that we have studied for coastal management is the Holderness Coast of Yorkshire. Here there is the fastest receding coastline in the whole of Europe, with an average of 2m per year. This has obviously caused many problems such as loss of farmland, and villages. This is a major problem and it is believed that 30 villages have been lost in the past 1000 or so years. Roads have also been destroyed. The main road serving the area is just 50m away from the cliff, so this problem will need to be addressed.
- ② ~~In Mappleton they~~ The reasons behind this is that Longshae Dyke has taken the sand from the natural beach, which was depending the coast. In Mappleton they have graded the cliffs and planted vegetation to try and stop the water attack the cliff as much.
- ③ They also put up two stone groynes, and rock armour at the cliff base. Further north at Hornsea, they have also built a sea wall. These coastal defences have slowed the rate of erosion, which meant
- ④ the large expenses of rehousing and

rerouting roads have been avoided). These defenses may have been expensive (£2m for stone groynes, £6000 per m for sea wall) but they have drastically helped slow the rate of erosion, and they will protect villages for years. It would have been far more expensive if nothing was done, and villages were destroyed. (15 marks)

Turn over the next question

21  
30

### Commentary for Example P

#### Question 3 – Coastal Environment

- (a)(i) 'Mud from the river' showed some understanding – a source and the material that came from it – and so gained a mark.  
'Offshore bar' showed none, so did not gain the second mark.
- (a)(ii) 1 This gained a mark for linking a chemical process to a type of rock.  
2 Freeze-thaw weathering was named, for one mark ...  
3 ... then it was explained, for a second mark.  
4 This could have gained another mark if the maximum had not already been reached.
- (b) 1 For describing constructive waves, any one of the bracketed points could have gained a mark.  
2 The points about destructive waves were also valid and also used comparative adjectives and so made clear comparisons between the two types of wave.  
3 This is the key comparison. The two sections in square brackets ensure that the answer is now worth the full four marks.
- (c) 1 The chosen feature is named and located. This alone would be worth a mark.

- 2 The process of isostatic re-adjustment is explained quite well, with a fairly clear sequence of events ...
- 3 ... but the position and the formation of the beach, cliffs, etc. is more or less ignored.
- 4 The last sentence adds nothing.

Summary: The clear parts of the answer are worth a good Level 2 mark but the absence of any useful reference to the beach, or any other features keeps the answer in that level.

- (d)
- 1 The area is located and described briefly. It gains some Level 1 credit.
  - 2 There is some reference to the costs of doing nothing, even if these are implicit rather than explicit. Still Level 1 but starting to develop ideas that can be used to answer the question precisely, we hope.
  - 3 More background but it is still not reaching the main heart of the answer.
  - 4 This section mentions 5 specific mechanisms that have been used to protect the coast here. This will be good if costs and benefits are considered.
  - 5 Finally the benefits are referred to ...
  - 6 ... and so are the costs. However these are only limited references with no discussion of social or environmental costs or benefits. There is an attempt to reach a conclusion but it is just an assertion, not really supported with evidence.

Summary: The answer shows some good learnt knowledge but it does not really build up a full picture of the different parts of the coastline. The two areas mentioned are not seen as part of a system with connections. The skill of using the candidate's knowledge to write a balanced assessment of the area, the management schemes and the costs and benefits is not shown. This answer matches the description of a Level 2 answer very closely.

**Example Q**

**Question 3 – Coastal Environments**

12

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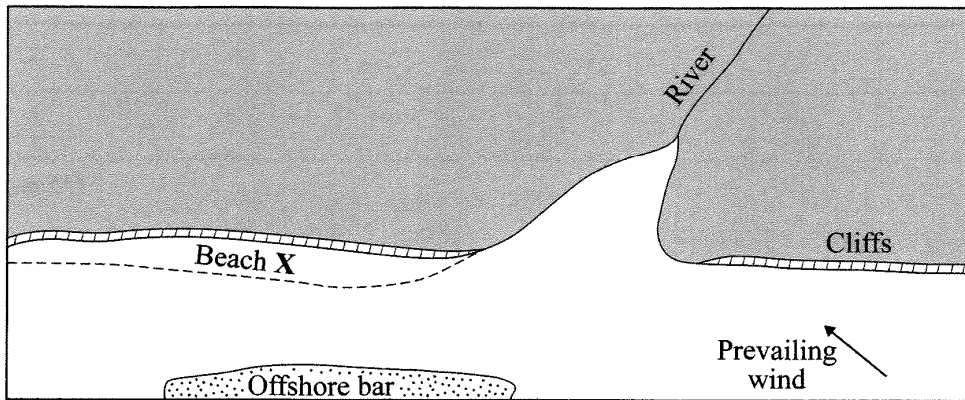
**3 COASTAL ENVIRONMENTS**

Q

**Total for this question: 30 marks**

(a) **Figure 4** shows part of a coastal system.

**Figure 4**



(i) Identify **two** sources of sediment at X.

Source 1 Mud from the river.....

Source 2 Offshore bar.....

(2 marks)

(ii) Outline the role of sub-aerial weathering in shaping the coast.

Sub-aerial weathering effects cliffs along the coast because (salt crystal growth occurs due to the sea spray and breaks up the rock by granular disintegration) this breakdown of rock causes collapse and you get a build up of scree at the base of the rock.) Also limestone cliffs are easily weathered or dissolved by acid rain.

(3 marks)



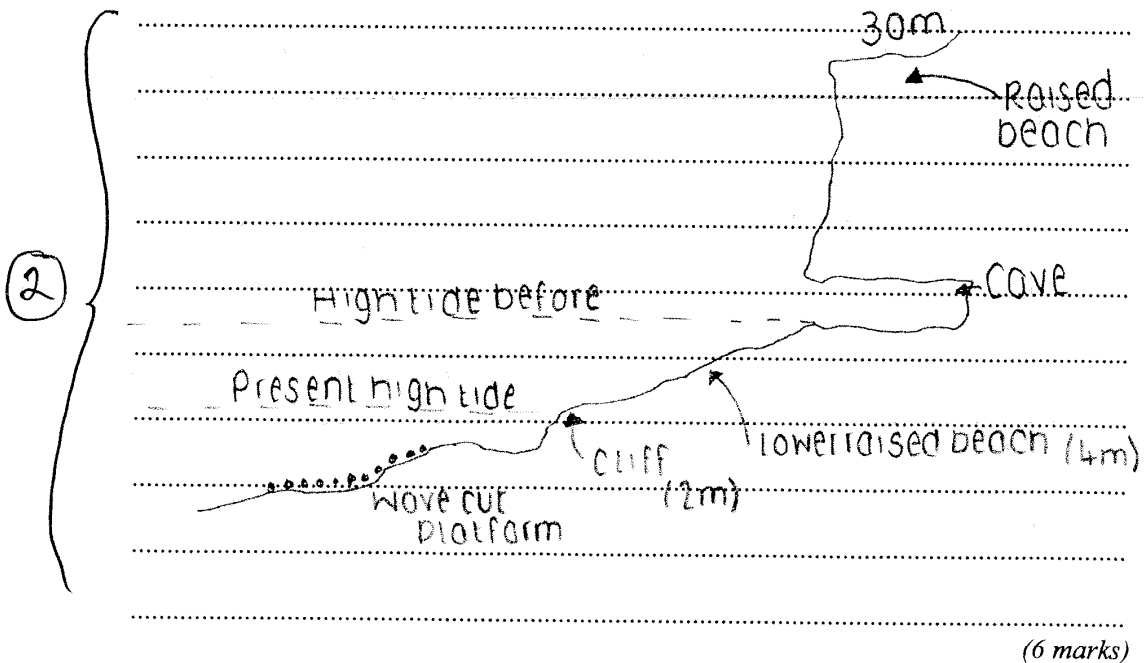
(b) What are the differences between constructive and destructive waves?

- (1) (Constructive waves have a long wave length of up to 100m and occur 6-8 times per minute whereas destructive waves have a small wave length of 25m but occur 10-14 times per minute.) (A)
- (2) Constructive wave has an elliptical orbit and a destructive wave has a circular orbit. (Constructive waves have only a small height of less than 1m causing them to spill whereas destructive waves are greater than 1m in height causing them to plunge.) (4 marks)

4

(c) Explain the formation of landforms typical of coastlines of emergence.

- (1) Raised beaches are found in NW Scotland and they are caused by isostatic sea level fall.



2

Question 3 continues on the next page

- (d) With reference to **one or more** case study of coastal management, discuss whether the benefits outweigh the costs.

- ① In Holderness on the coast of Yorkshire the coast was receding at 2 metres per year making it the fastest receding coastline in Europe. This caused the loss of at least 30 villages since Domesday and roads such as the main A15 road was lost. This was all caused by longshore drift (LSD) as it removed all the natural beach defences.
- ② ~~example in Mablethorpe~~ they prevented LSD in places such as Mablethorpe as they graded the cliff, planted vegetation so that the roots would hold the surface together and stop water flowing over the edge because the roots would hold the water in. They also built 2 stone groynes and put rock armour at the base of the cliff (the stone groynes cost £2 million and prevented erosion at Mablethorpe but it prevented material moving southwards.)
- ③ Further North at Hornsea, ~~armour~~ wooden groynes and a sea wall with rock armour were put in place and it has slowed the rate of erosion down and the costs of rehousing and re-routings have been avoided.

.....

.....

.....

.....

.....

.....

.....

(15 marks)

6

16
30

**Turn over the next question**

**Commentary for Example Q**

**Question 3 – Coastal Environment**

- (a)(i) 1 mark for 'mud from the river'.
- (a)(ii) 1 A process is named, with some description, so the answer gains one mark, but there is not enough detail in the explanation to gain the second.
  - 2 This describes the next stage in the process clearly – 1 mark.
  - 3 There is just enough detail here for the final mark.
- (b) 1 A clear, comparative description gains 2 marks.
  - 2 This sentence is less detailed but still contains good comparison. It is certainly worth a mark but not quite full enough to gain an extra mark.
  - 3 Another good, clear comparison. This would be worth 2 marks if there were still 2 available.
- (c) 1 A feature is named and located. Then the answer goes on to start explaining the formation – but this is much too brief with no mention of the causes of the fall or the meaning of the term 'isostatic'. This is still in Level 1.
  - 2 The diagram has been learnt carefully and drawn neatly ... but does it answer the question? There is certainly no explanation for the 30m raised beach. 'High tide before' and 'present high tide' are both marked, with the 4m raised beach lying between them – but there is no explanation. This diagram needs a few little annotations to explain what it shows. The examiner is being left to do too much thinking for the candidate and so the mark cannot really move into Level 2, although it felt as though the candidate knew a lot more than was actually put in the answer.

- (d)
- 1 Mainly background, this sets the scene but does not get to the real question yet.
  - 2 Several aspects of management are mentioned with some detail on one aspect. This is starting to build up Level 1 marks but the answer has still not got on to discussion of costs and benefits.
  - 3 This is a very frustrating little section. The candidate mentions one cost – without any detail – and then mentions a benefit – without any attempt to elaborate on how erosion was prevented. Then the candidate mentions the prevention of material moving south – which could have opened up a whole new area of discussion – but the opportunity is missed again. There is *just* enough in this section to meet the requirements for a Level 2 answer but absolutely nothing to move the mark above the bottom of the Level.
  - 4 There are lots of questions left unanswered here. Why at Hornsea? What did these schemes do to stop erosion? Who was saved from needing re-housing? What was saved from needing re-routing? Was it worth it? Why wasn't this done along the whole coast?

There is nothing in this last paragraph to move the mark up from the bottom of Level 2.

## Example X

### Question 5 – Global Population Change

20

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#### SECTION B

Answer **Question 5** and **one** other question from this section.

#### 5 GLOBAL POPULATION CHANGE



Total for this question: 30 marks

Study **Figure 6** which shows a variety of population indicators for six countries in 2005.

**Figure 6**

Country	Birth Rate per thousand	Death Rate per thousand	Infant Mortality Rate per thousand	Life Expectancy years
Sierra L	47	24	165	40
Malawi	50	19	100	45
Botswana	25	28	57	35
Iran	18	6	32	70
China	12	6	27	72
UK	12	10	5.2	78

23  
31  
-3  
12  
6  
2

(a) Define:

(i) infant mortality rate

This is the (number of deaths of infants aged one year or younger per 1000) (live births in one year.)

(2 marks)

(ii) life expectancy.

① This is a statistical measure usually calculated from differing gender and geographic location. (It shows the average length of survival)

②

(2 marks)

2

1

- (b) (i) Suggest reasons for the variation in the rates of population change shown in Figure 6.

- ① The rate of population change is the birth rate minus the death rate, places such as Sierra Leone & Malawi have exceptionally high population change rate. This is because these places are LEDCs and tend to have children to look after their parents and to work on farms etc. Botswana has a ~~low~~ negative population change due to AIDS and other diseases. The UK has a very low population change as it is a MEDC & women are now having children later in life or not having them.
- L2 ⑤ them (6 marks)
- Question 5 continues on the next page at all.
- China's population change rate has decreased dramatically due to the enforced one child policy.
- ⑥

4

- (ii) Outline some of the issues for economic development linked with a population structure with a very high proportion of people over 65 years old.

The 'Demographic Timebomb' is one issue with a population that has a high pop.

- ① of elderly people. The increasing percentage of older people need increasing number of
- ② working people to pay for their pensions. There are ~~and~~ <sup>also</sup> people to look after
- ③ the elderly & work in OAP names. Money from taxes is (mostly) channelled
- ④ into care for the elderly & away from industrial developments & education. (5 marks)

- (c) With reference to a named country, evaluate attempts to manage population change.

Name of country The country I have studied is China and its one child policy. One benefit of

- ① the policy is the drop in population growth, this shows that ~~it~~ ~~is~~ to a certain extent the policy has been successful. However, the policy lacked basic human rights. ~~then~~ There has been an increased involvement of women in the labour force, this is also a positive outcome of the policy & women are gaining equality and no longer need to rely
- ② on their husbands. The policy has

- lead to a gender imbalance as many women choose to abort their baby
- ③ If it's known to be a girl, it has also increased the number of abandoned children. On the other hand, many people have increased savings as
- ④ children are extremely expensive.
- In contrast to this the policy only applies to the Han Chinese people which is discrimination as other ethnic groups are not subject to it.
- Many families in China still also have the desire for 'larger' families, however they are unable to do so without having to pay fines.

4

(15 marks)

12
30

### Commentary for Example X

#### Question 5 – Global Population Change

- (a)(i) There should be two parts to the answer. This candidate has them both, as shown in the brackets, so gains both marks.
- (a)(ii) 1 The first part of the answer is really irrelevant, although it is actually true and quite interesting. Candidates need to learn to answer such short definition type the questions precisely without offering unnecessary background detail.
- 2 This *just* gains one mark.



- (b)(i)
- 1 The candidate made a good start to answering this question by working out the sums on the table in Figure 6. Encourage candidates to do this *as long as they do not obscure other answers* by doing so.
  - 2 The first part of this sentence was not strictly necessary, although it might have been useful for the candidate to help clarify his/her thoughts. The second half of the sentence is useful as it makes the point about 'exceptionally high' change rates. This at least implies some idea of variation and comparison.
  - 3 This sentence gives the outline of a good idea – with a lot more implied than actually written. The idea has not yet been developed clearly. This examiner feels that the candidate could have developed the answer further at this point but has not done so. Therefore the mark is still in Level 1.
  - 4 This is another sentence with a lot implied but not enough said. Still Level 1.
  - 5 Now there is a contrast between the less developed countries with (generally) high rates of change and a more developed country with low rates of change. Moreover there is the start of an explanation for that difference. Those two good points together now move the answer into Level 2.
  - 6 Finally there is a brief reference to another country with a falling rate of population change. However, it is not well developed. It is not enough to move the answer towards the top of Level 2.

Summary: 5 of the countries were covered (and the most difficult one was ignored). In each country one point was made, usually about birth rate. The range was covered but nothing was done in any great depth. Comparisons were implied rather than stated clearly. No figures were quoted, even though they had been worked out on the previous page.

The examiner felt that this candidate knew a lot more but had left the examiner to make too many assumptions and to fill in the blanks. Maybe he/she felt constrained by the number of lines allowed but the hand writing was big and the answer did take some time to reach the point at the start. People with such a large hand may often find that they need to write more than the space allows and this candidate had gone beyond the lines given, but there was still not enough development of ideas. Candidates sometimes penalise themselves by squashing their work into inappropriate spaces and making it illegible.

- (b)(ii)
- 1 A quarter of the space has been used and the candidate has only rephrased the question. There is nothing to credit yet.
  - 2 A key idea stated – but then not developed.
  - 3 Another key idea not developed.
  - 4 This is a very careless statement. The candidate might have meant to develop the key idea from 1 above but has spoilt a good point by exaggeration and unsupported assertion.

Summary: The two ideas that are mentioned are not developed. The answer has a very narrow view of the nature of people over 65 years old. This does not rise above low Level 1.

- (c) 1 This goes straight in to trying to evaluate the policy. It is good that the candidate is not wasting time and space here, but this is a 15-mark question and here some scene setting would have been useful. Why did China need to reduce its population growth? What was the rate before the policy was introduced?

Additionally the phrase ‘...to a certain extent...’ always seems a bit hollow in an evaluation question.

- 2 This is a valid point – as far as some women in some parts of China are concerned – but it is not backed up by any detail or justification.
- 3 Another reasonable point with no supporting evidence or any development beyond the broad generalisation.
- 4 ‘Increased savings’, so what? Is this good, or bad? Who benefits? Is it the state or the individual? This is a statement, not a real evaluation ... as are the next two statements.

Summary: This answer fulfils all the criteria for a Level 1 mark. There is a string of unconnected statements with no support and no development of ideas.

A better answer might have started with the statement of a problem, or problems. Then it might have described a policy designed to tackle that problem. Then it might have stated how well the problem had been tackled, ideally measuring the policy’s success against clear criteria.

Alternatively the answer could have made clear statements about successes and failures of the policy. That is what this candidate tries to do – but without ever explaining what the policy was trying to do in the first place.

Finally, the answer could have tried to evaluate success and failure from different points of view. That approach is also partly apparent in this answer ... but again the candidate does not state that clearly, leaving the examiner to interpret the answer.

## Example Y

### Question 5 – Global Population Change

20

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#### SECTION B

Answer **Question 5** and **one** other question from this section.

#### 5 GLOBAL POPULATION CHANGE

Total for this question: 30 marks

Study **Figure 6** which shows a variety of population indicators for six countries in 2005.

Figure 6

Country	Birth Rate per thousand	Death Rate per thousand	Infant Mortality Rate per thousand	Life Expectancy years
Sierra L	47	24	165	40
Malawi	50	19	100	45
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Iran	18	6	32	70
China	12	6	27	72
UK	12	10	5.2	78

(a) Define:

(i) infant mortality rate

This is the (number of deaths of infants that are one year of age or younger, per 1000 live births.

(2 marks)

(ii) life expectancy.

① (This is the measure of the average length of life in an area) It is calculated by separating differing gender and location. It is technically the expected time remaining to live, for a person of any age.

(2 marks)

- (b) (i) Suggest reasons for the variation in the rates of population change shown in Figure 6.

The rate of population change is Birth Rate - Death Rate. Sierra Leone and Malawi have a high growth rate. This is because

- ① they are LEDC. In Botswana there is a negative population change (-3). This is due to (awful living conditions), and many diseases, mainly (AIDS, are killing) lots
- ② of people. There are (more people dying than are being born). The UK has a low population change (2), as it is a MEDC, and (people are working) and are (more
- ③ educated). China also has a low growth
- ④ rate, because of the one child policy. (6 marks)

Question 5 continues on the next page

- (ii) Outline some of the issues for economic development linked with a population structure with a very high proportion of people over 65 years old.

- ① There is an increasing percentage of older per, 65+. This also means that the percentage of people in the working age is decreasing. (This means that there will be less people to pay for the older
- ② people to live, or to be put in homes)
- ③ (Most people in NHS hospitals are elderly, and are becoming overcrowded). (Money
- ④ from taxes is being put into care for elderly, and away from education and development). This is called the 'Demographic Timebomb' (5 marks)

2

- (c) With reference to a named country, evaluate attempts to manage population change.

Name of country China

- In China, the one child policy was introduced. This was because the population was growing just too rapidly, and the resources
- ① available would soon not be enough. The government introduced the 'one child' policy. This was that only one child per family could be born. If families followed this, rewards were given out,
- ② and punishments if they disobeyed. The benefits of the policy were that

- each family had increased savings, as
- ③ they only had one child to look after. This also led to an increased involvement
- ③ of women in the labour force in China. Also, its main aim was carried out, and there was an overall drop in
- ④ population growth. However, there were some downsides of this policy. It was a lack in human rights. The government were telling families how many kids they had
- ⑤ and it was (totally ~~inhuman~~ inhuman). An increase in technology meant that the sex of the baby can be determined, and families were aborting girls, so they could have boys. This led to a huge gender
- ⑥ imbalance. Children were being abandoned on the streets, and there was 'little emperors'. These were spilt kids, who ended
- ⑦ up becoming violent and aggressive. There was
- ⑧ a desire for larger families from (everybody) (15 marks)

7

14
30

Turn over for the next question

**Commentary for Example Y****Question 5 – Global Population Change**

- (a)(i) This is worth 1 mark. Some reference to 'per year' was needed for the second.
- (a)(ii) 1 Good, clear statement. It is certainly worth one mark and just about worth two.
- 2 This elaborates and develops the first statement. Now the answer is clearly worth the second mark.

- (b)(i)
- 1 This statement is almost useless. It does not even start to explain why the population is changing. It leaves *all* the work and thinking to the examiner!
  - 2 'awful living conditions' gains no credit. However, the reference to AIDS is relevant and the comparison between BR and DR develops it a little.
  - 3 Does 'people are working' imply that people are not working elsewhere? That is rather a difficult statement to interpret. Then how does 'more educated' affect the rate of population change? A lot of stages in the argument are missing.
  - 4 Again, there is no explanation. What was the 'one child policy' and how did it work? Candidates must explain what they are writing about.
- (b)(ii)
- 1 This just restates the question and does not answer it.
  - 2 A very basic point is made, but the candidate has actually been very dismissive of older people in the way the sentence has been phrased.
  - 3 The sentence is grammatically poor and not relevant anyway.
  - 4 This is another basic, Level 1 statement. With point 2 it just moves the answer up to be worth 2 marks.
- (c)
- 1 The issue is clearly stated.
  - 2 Now the policy is outlined. The candidate is ready to evaluate the policy's success.
  - 3 Two benefits are stated clearly, although neither has much detail. The examiner wonders if the answer is losing focus.
  - 4 This is better. It states clearly that the 'main aim was carried out' and this now reaches Level 2. However, there are no figures given, so the answer stays at low Level 2.
  - 5 Strong views on issues are fine, but beware of exaggeration. Earlier this candidate had stated that the country feared that resources could run out so can he/she justify the statement that it is 'totally inhuman' to try and stop that happening and widespread starvation resulting. The answer would benefit from more academic detachment here.
  - 6 The answer is back on track. This is a genuine problem – but how big is the gender imbalance? Statistics could be used to support such a statement. 'Huge' is another rather emotive word.
  - 7 In the 1980s the problem of 'little emperors' received widespread attention in the British media. These children will now be well into their twenties. How widespread is the problem of violent aggressive young adults? What a pity the candidate cannot support or refute this statement.
  - 8 Everybody? In a population of 2.1 billion such unanimity is rather unlikely.

Summary: The answer started well and a good plan appeared to be developing. At point 4 the answer was into Level 2 and had dealt reasonably well with successes of the policy, albeit without statistical support. The second half of the answer provided some anecdotal evidence about the downside of the policy. However, there is no attempt to evaluate the extent to which these obvious problems are affecting the overall success of the policy that was designed to ensure a balance between population