

# IGCSE

London Examinations IGCSE

Geography (4370)

Exemplar candidate responses from the  
May 2005 examination session

March 2006

delivered locally, recognised globally

Exemplar candidate responses

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Geography

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## Paper 2H

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### A grade A script

#### General comments

This was a very high-scoring script with approximately 85% of the available marks being gained by the candidate. The specification document points out the aims and assessment objectives (page 4) against which candidates' work is judged, and the grade A descriptors on page 32 of the document further inform judgement. The published mark scheme also needs to be read alongside the comments that follow.

Many of the features on these specification pages and in the mark scheme are evident in this script. One key aspect of the script is its consistency. The candidate scored continuously throughout the paper, left no unanswered gaps, obeyed the rubric and largely answered the questions as the examiner had intended they be answered. Of the seven questions answered, 75% of the marks scored was the worst performance (questions 4 and 6); question 1 saw 100% achieved. This consistency and narrow range of performance also applied to the parts of each question; all parts adopting a levels of response marking strategy scored either at level 2 or level 3.

## Section A

Question 1 on the specification's Water unit, more particularly drainage basins, the hydrological cycle, flooding and river management, produced a perfect answer for this level of examination. The candidate showed good knowledge and understanding of the idea of a drainage basin in terms of its stores and flows ((a)(i) & (ii)), its nature as part of the hydrological cycle ((a)(iii)), and its structure with a river being a component ((b)(ii)). Pleasingly, the candidate was able to draw an accurate and labelled diagram in (b)(ii). Geographical terminology was known e.g. *discharge* in (b)(i) and used throughout the question e.g. *river capacity* in (c) (i). The causes of river flooding, both physical (e.g. excessive precipitation; impermeability), and human (e.g. deforestation; tarmac surfaces; urban drainage) were known and in each case explained. Finally, the candidate produced an excellent response to the closing, open-ended part of the question. The answer opened by referring to the Mississippi river management scheme, outlined its main purpose and then went on both to describe and explain how it actually does this. There were place names (e.g. St. Louis), specific details (e.g. 106 reservoirs), methods (e.g. diversionary spillways), and process explanation (e.g. widening the channel to increase its capacity).

This answer acts as a model for future good practice by candidates aspiring to the highest grade. Aspects of other answers do the same by :

1. doing the closing question part well – offering specific details of actual places, events and schemes by knowing the case studies identified in the specification in order to hit the Level 3 quality of response criteria, e.g. the candidate's response on Mts. Pinatubo and St. Helens to question 2(c) does this.
2. explaining, especially links and processes, and going beyond merely stating, e.g. the candidate's responses to questions 3 (d) and 4 (c) (i).
3. using geographical language, especially the terminology of the subject, e.g. the terms used in their responses to questions 5(a)(ii) and 6(a)(i) help to make them full-mark answers. It is worth remembering that every 2 mark question has a 1 mark as well as 2 and zero mark answers.
4. annotating self-drawn maps and diagrams e.g. diagrams as in question 2(b) that go beyond mere labelling are highly rewarded.
5. showing accuracy in the objectively assessed, often data-response tasks set early in the question e.g. the candidate's responses to questions 4(a)(ii) and 5(a)(i).

No other Section A question achieved top grade consistency throughout, though grade A characteristics were evident in parts of all other questions.

SECTION A

Answer all six questions.

1. Water

(a) Study Figure 1, which shows the hydrological cycle of a drainage basin.

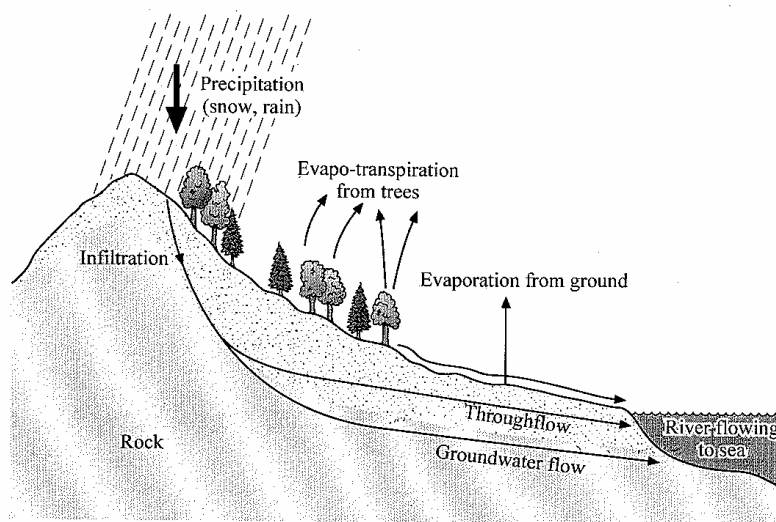


Figure 1

(i) Name **one** store of water shown in Figure 1.

*Water stored in the sea*

(1)

(ii) What is the difference between **throughflow** and **groundwater flow**?

*Throughflow is the flow of water through the underlying soil. Groundflow is the movement of water through the underlying rocks below the soil.*

(2)



(iii) Describe the transfer of water through a drainage basin. Start with the input of water as precipitation.

- source
- tributaries
- confluence
- storage

The water fallen into a drainage basin might be stored (storage) in the lake or travel to the sea as through or ground water flow. Some ~~the~~ <sup>part</sup> travels on river or a surface run off. Some ~~are~~ directly returns to the atmosphere as Evapo-transpiration or evaporation from ground. The river takes the water ~~is~~ the quickest, to the sea (output)

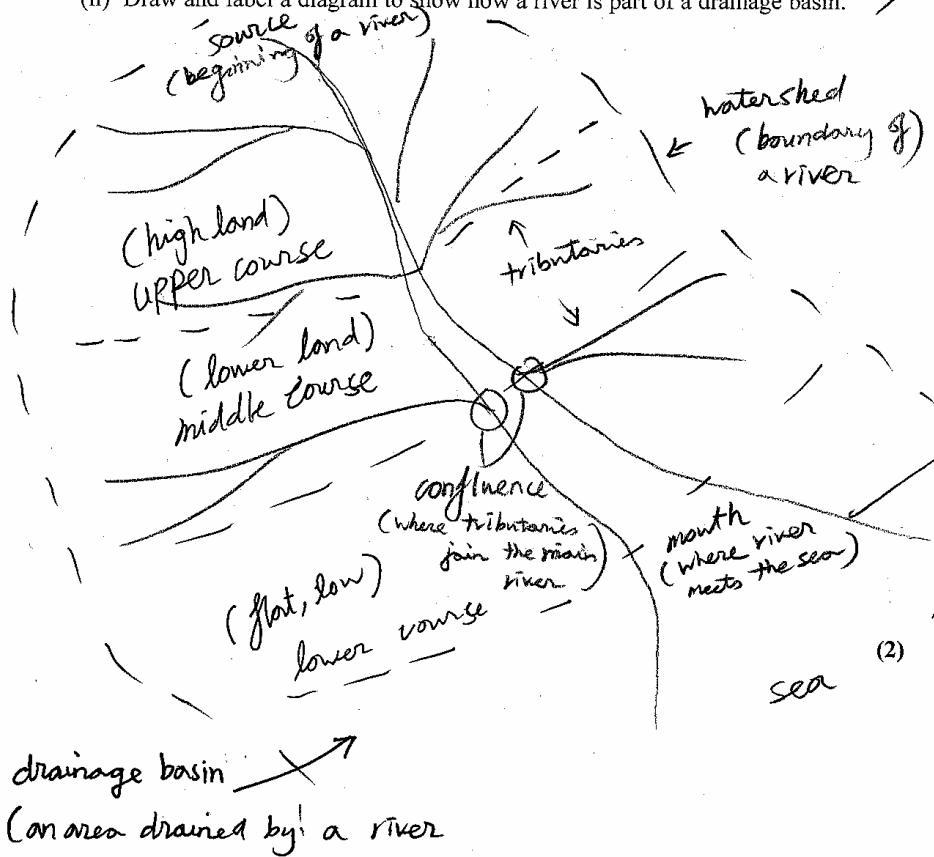
(3)

(b) (i) What term is used to describe the volume of water in a river channel?

discharge

(1)

(ii) Draw and label a diagram to show how a river is part of a drainage basin.



(2)



M 2 3 0 4 6 A 0 3 3 6

Turn over



(c) (i) Explain the main physical causes of river flooding.

The causes can be ~~also~~ unusual excessive amount of precipitation that exceeds the capacity of a river to contain the water.

Another reason ~~is~~ can be saturated soils or impermeable soils such as clay or frozen ground that increased surface ~~of~~ runoff. (2)

(ii) Suggest how human activities in a drainage basin can help to cause flooding.

Human activities such as deforestation for farming reduces ~~the~~ in the number of trees mean there is less interception of rain drops and no roots to slow down the speed of water reaching the river.

Increase of impermeable surfaces like tarmac and cement increases surface runoff.

The speed of water flow to the river is increased by piped water, this gives less time for a river to carry off the water ~~thus~~ to flooding.

(d) For a named river management scheme, describe and explain its purposes.

Name of river management scheme: Mississippi river management

Its purpose is to prevent the river's flood risk and to protect the settlements such as St Louis.

- dams  
- diversionary  
- channelisation

Over 6 huge dams and 1600km of chains of 106 reservoirs were built in order to hold the excess amount of water e.g. the Tennessee valley authority. The dams are multi-functional with provision of HEP, irrigation and recreation, and prevent floods.

(Diversionary spillways) were built to divert excess water from the main river along 9km spillway to Lake Ponchartrain e.g. Bonnet Carre way in St Louis. This reduces the risk of river overflowing or discharge is reduced.

(Channelisation, deepening, widening of river to increase its capacity to hold the water) while increasing its speed to carry water to the sea by shortening the river by 300km. (6)

(Total 20 marks)

6  
Q1  
20



2. Hazards

(a) Study Figure 2, which shows the island of Montserrat (West Indies) before and after the Soufriere Hills volcano erupted in 1997.

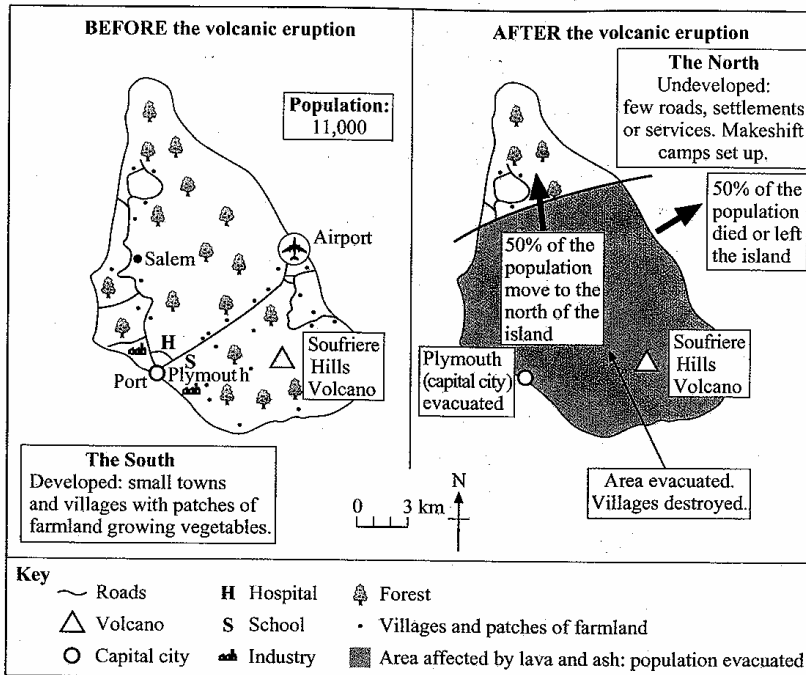


Figure 2

(i) Compare the impact of the eruption in northern Montserrat with that in southern Montserrat on:

1. Landscape *Forests are burnt to ash and destroyed, roads in the South and the whole land is covered by ash & lava. However in the North, still some forests and villages are safe.* 2
2. Population *In the South, 50% of the population either died or left the place. The rest had to migrate to the North. The population of the North is unaffected by but now faced with increased number of migrants causing over-population.* 2



3. Transport <sup>all</sup> In the South, the roads are destroyed. The airport is also destroyed while part is damaged. In the North although only few, the roads are safe. There is no other transport in the first place. 2  
(6)

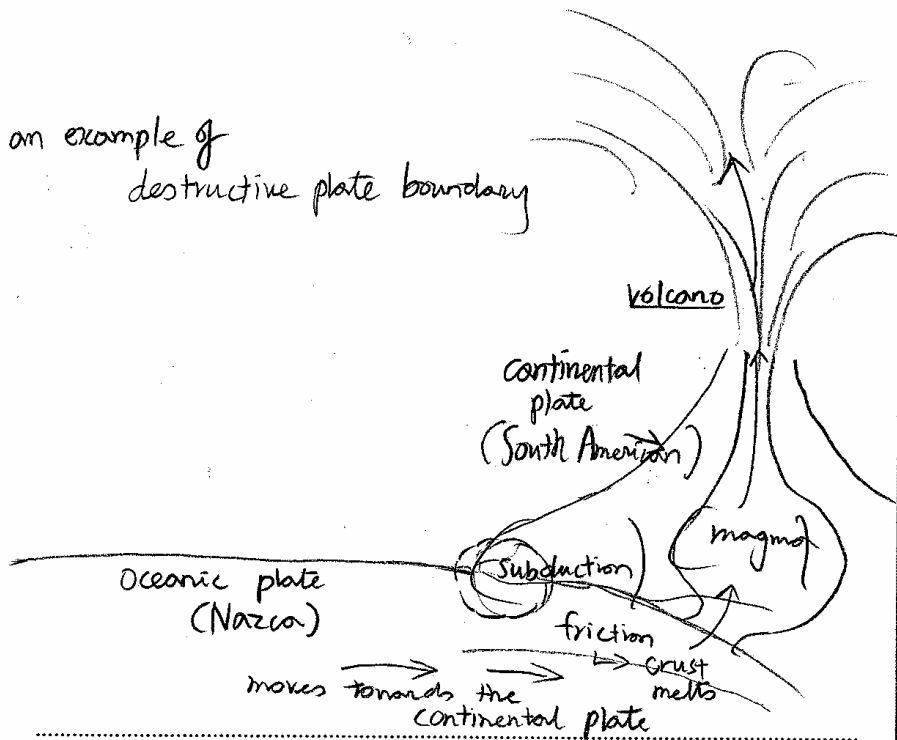
(ii) Give one short-term effect and one long-term effect of the eruption.

1. short-term effect... death of the people due to eruption and ashes. ✓

2. long-term effect... disruption of livelihood and destruction of farm/industry cause unemployment. ✓ A 2  
(2)



(b) Using an annotated diagram, explain why volcanoes exist at plate boundaries.



Volcanoes occur only at (destructive and constructive boundaries). At the destructive boundary, an oceanic crust ~~plate~~ <sup>crust</sup> goes moving towards a continental ~~plate~~ <sup>crust</sup>, and subducts it ~~as~~ due to its heavier density. Here, due to the collision and friction an ~~en~~ enormous heat energy (melts) the crusts to magma. ~~The~~ As this magma tries to rise over the surface of the earth ~~as~~ a volcano develops.

At the (constructive ~~de~~ boundary), two plates <sup>(e.g. Pacific and Eurasia)</sup> ~~are~~ <sup>moves</sup> away from each other) creating a gap between them. Then the ~~half~~ ~~is~~ ~~the~~ ~~crust~~ melts by the pressure of the crusts rise through it as a volcano. 5

L3- (6)



M 2 3 0 4 6 A 0 7 3 6

7  
Turn over

(c) Referring to at least one named example, describe how people prepare for and respond to volcanic eruptions.

Named example(s) ... Mount Pinatubo in Phillipine and  
Mount St Helens in America

- P
- Emergency stockpiles
- predicting
- detecting
- evacuate

Preparing for the volcanic eruptions, the authorities make emergency stockpiles of food, clothes and medicines where they cannot be effected by the eruption. Thus they can be used for relief act of the people for short while.

The governments invest a great in (high tech prediction) and detecting machineries in order to ~~prevent~~ be aware of next eruption and (to evacuate) people before the disaster e.g. satellite. Some countries, on the government lacks money to invest, (train people to look for changes in of the volcanoes e.g. bulge on the mountain side.)

When volcanic eruption is (predicted, the authorities warn the residents and evacuate them quickly.

In MEDC's people are ~~not~~ more educated with emergency procedures and ready to follow the instruction. In LEDC's people are very reluctant to leave their home in fear of losing everything.

L3+ (6)  
(Total 20 marks)

Q2  
18



3. Production

(a) Study Figures 3a and 3b, which show employment in the three economic sectors of a sample of countries.

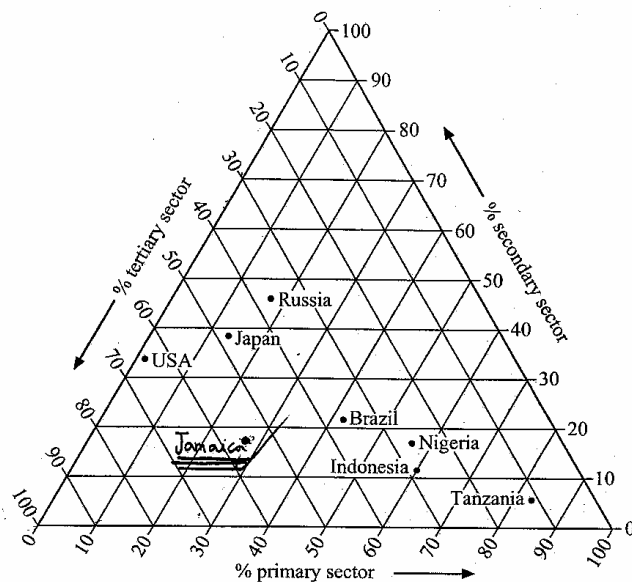


Figure 3a

Country	Percentage of workforce employed in			Level of economic development
	Primary sector	Secondary sector	Tertiary sector	
Tanzania	83	6	11	LEDC (Less Economically Developed Country) ↑ MEDC (More Economically Developed Country)
Indonesia	64	12	28	
Nigeria	56	17	27	
Brazil	41	22	37	
Jamaica	28	17	55	
Russia	17	47	36	
Japan	13	39	48	
USA	2	33	65	

Figure 3b



(i) Use information from Figure 3a to complete Indonesia's entry in Figure 3b.	(2)	2
(ii) Use information from Figure 3b to plot the position of Jamaica on Figure 3b.	(1)	1
(b) Name <b>one</b> occupation that is typical of each of the following three sectors:		
1. Primary sector		farming ✓
2. Secondary sector		car manufacturing ✓
3. Tertiary sector	(3)	banking ✓
(c) As a country develops economically, its employment structure changes. Use information from Figures 3a and 3b to explain this statement.		
<p>The less developed countries which are at the top of the least e.g. Tanzania &amp; Indonesia have highest level of employment in Primary sector (83% &amp; 60%) and the <del>second industry</del> secondary &amp; tertiary industries are relatively low.</p>		
<p>However as countries more developed like Russia <del>Brazil</del> &amp; Jamaica less primary but much higher secondary &amp; tertiary industries.</p>		
<p>Then the most developed countries have highest proportion of 3rd industries than 2ndary. (4)</p>		



(d) Farming in some LEDCs (Less Economically Developed Countries) fails to prevent food shortages.

drought  
famine  
- flood

(i) Explain why such shortages occur.

The shortages maybe due to (incapability to tackle natural disasters such as drought and flood). As LEDC's lack technology & money to built dams or other preventing measures they have no other choice but to face the disasters and let their crops to be dried or washed away.

The other reason can be (inefficiency of farming) or due to (lack of capital & technology). Most farmers are subsistent who farm on too small lands that are not enough enough to feed them selves and ~~also~~ cannot afford fertilisers or <sup>(4)</sup> machinery.

(ii) For one named LEDC, describe two attempts that have been made to increase food supply.

Name of LEDC: Bangladesh

1. Development of (special breeds of rice crops): ~~eg~~ ~~boro~~ boro, <sup>ans</sup> ~~asam~~ ~~asam~~. Asam can be grown in wetter conditions thus can be grown during flood/monsoon seasons. Ans can be grown in drier seasons with less water. These new crops can be planted alternately or together thus <sup>more</sup> crops can be grown all year around regardless of seasons.

2. Building of dams and diversionary channels to hold flood water in wet seasons and (irrigation) <sup>give</sup> farm lands in dry seasons. Thus, more lands can be cultivated and reduce the (effects of drought) allowing lands can be cultivated throughout the year (3 times harvest a year).

(6)

(Total 20 marks)

03

1/6



Turn over



#### 4. Development

- (a) Study Figure 4. This shows information about the South West region of the UK (United Kingdom) in 2000, including wealth, indicated by GDP (Gross Domestic Product) per person.

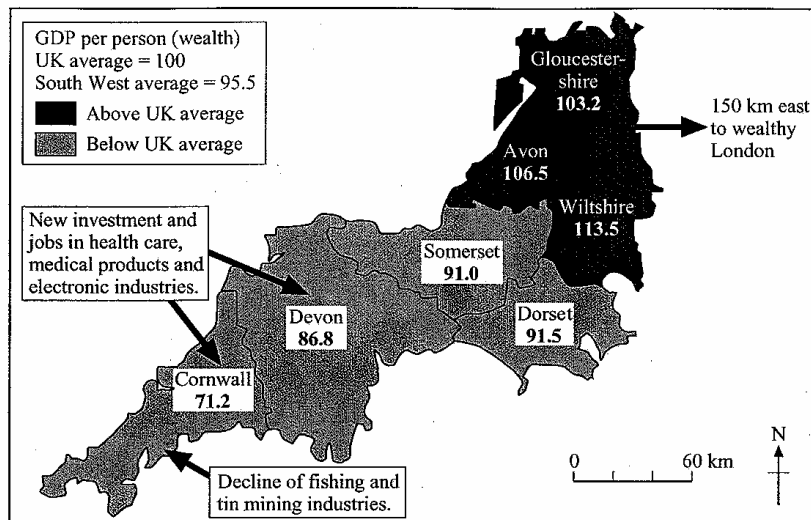


Figure 4

- (i) The South West region is one of the less economically developed regions of the UK.

What evidence is there to support this claim?

In the North-west <sup>(Wiltshire)</sup> region which is closer to the country's capital London, the income per capita is above the UK average. However the South-west part including Somerset & Dorset, ~~area~~ the income per capita is below the average, meaning jobs are low paid.

The traditional industries in the region are mostly primary & secondary which are lowly paid and unskilled jobs. There are now even declining causing unemployment.

The ~~far~~ regions are very far from the commercial centre of London meaning they are peripheries where wealth is ~~decreasing~~ less. (further about 800km <sup>(4)</sup> away)



(ii) Describe the pattern of wealth (GDP per person) in the South West region.

The closer the distance to the commercial centre & largest market London, the higher the income of the people. e.g. Gloucestershire, Avon & Wiltshire. The further region have much lower income and the furthest Cornwall gets the lowest. (2)

2

(iii) Using Figure 4, give two reasons to explain why Cornwall has the lowest GDP per person in the South West region.

1. As it is the furthest from the main market of the country, few industries would like to invest or locate in that region due to high transporting cost of goods and disadvantage of being to mean less jobs are created.
2. The main industries of the Cornwall is primary (fishing) and secondary (mining) which is very low paid jobs and unskilled. Also many people should be unemployed due to decline of the industries. (4)

3

(b) Apart from a low GDP per person, describe two other features you would expect in a less economically developed area.

1. Less lack of services as few little industries & companies want to locate there. Little investment industries means little job thus less demand for services such as shops as little people can afford them or many leave the area to find better place.
2. Isolation due to little or lack of adequate transportation and communication linkage. As little industries comes up little investment is made. With little money to improve the transport the accessibility of the area to the other places is very bad. (4)

2



Leave blank

(c) With reference to a named less economically developed area of a country other than the UK, explain why new investment and jobs are so important for development.

Named less economically developed area... (South Italy (e.g. Talo))

(In order to develop an area, people need money) and the money comes from industries' or governments' investments, to improve the area and create jobs.

In order to attract companies & businesses to create jobs, accessibility and basic infrastructure have to be improved. This can be done by government ~~major~~ investment to build roads and improve electricity & water supply.

Once the above things are done, <sup>new</sup> companies would start to locate and thus providing jobs. With people getting employed and receiving reliable income, (demand for other products ~~services~~ and services would go up thus creating an opportunity for others) (e.g. shopping malls & restaurants)

L3 - (Total 20 marks)

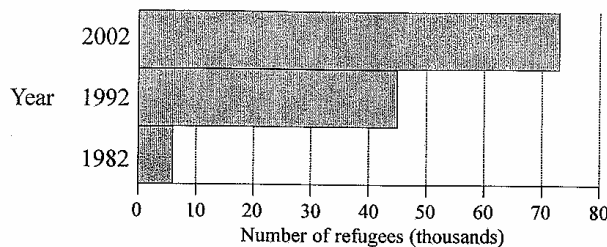
5  
04  
11

These will create (continuous multiplier effect) that would finally develop the area economically.



5. Migration

(a) Study Figure 5, which gives information about refugees entering the UK (United Kingdom) in 1982, 1992 and 2002.



Year	Main sources of refugees
2002	Iraq, Zimbabwe, Somalia
1992	Former Yugoslavian republics, Sri Lanka, Turkey
1982	Poland, Ghana, Iraq

Figure 5

(i) Describe how refugee migration into the UK changed between 1982 and 2002.

Since the 1982, the number of refugees increased from 6000 to 45000 to 73000. More than 12 times increase. In 1982 the refugees mainly come from Poland & Europe and middle east but soon changed to Eurasia and African countries. (2)

(ii) Referring to refugees, explain how forced migration differs from voluntary migration.

example of forced migration when people are, ~~people who~~ one threatened and forced to move out of one area due to civil wars, political persecution etc. etc.

Voluntary migration is people who chose to move to other place searching for better life <sup>quality</sup> standard and job opportunity. (3)



(b) (i) Suggest **two** reasons why some of the refugees shown in Figure 5 might seek asylum in the UK.

UK has high standard of living as a developed country. Thus the refugees might expect to find an opportunity to start a new life.

UK has relatively open migration policies to asylum seekers as long as they can prove that they are threatened if they returned to their country.

(ii) Suggest why some refugees may later feel that they made the wrong decision in seeking asylum in the UK.

(Growing prejudice and racial tension) between the migrants and British locals. The locals feel that the foreigners are dangerous or (taking up their jobs) & places, ~~then~~ or simply don't like the migrants due to (culture difference and languages.)

Due to high prices of living it is very difficult to ~~live~~ make a living for foreigners and also (3) difficult to get high skilled job with good income due to language and education. lack of

2

3



Leave blank

(c) (i) Explain the push-pull model of migration.

Push-pull model of migration shows the push factor which (discourages people to live in an area) such as lack of services or jobs, and (pull factors) such that encourages people to leave one place and move to the other e.g. better living standard & job opportunities.

4

(4)

(ii) Use the push-pull model to help explain one named international migration.

Named international migration ... ~~Spanish~~ workers to France & Portugal Portugal

The pull factors of ~~the Spain~~ for the most of the people ~~are~~ Portugal has the (lowest average income) per person in the EU and lowest percentage of urban population. The workers are usually farmers who have to work on small plot of lands that have to be sub ~~div~~ divided among families causing lack of enough lands to farm. There is (little industries) to provide jobs thus there is huge unemployment. The (standard of living is very low) due to lack of services and inadequate transportations.

Therefore many workers are attracted ~~the countries like~~ France which is more developed with (more job opportunities and higher quality of life) e.g. the workers could (earn as much as five times more of average income) even while (6) working in factories or shops.

4

Q5  
18

(Total 20 marks)



17

Turn over



(ii) Explain how shanty towns contribute to the growth of mega-cities in LEDCs.

The shanty towns hold millions of population for the cities which is ~~very~~ incapable of taking in even increasing (migration). The ~~rest~~ homeless dwellers that consists the cities' population live in shanty towns and work in the cities (e.g. Calcutta) (2)

2

(iii) For two of the locations marked A, B, C or D, give reasons why a shanty town is located there.

Location ~~Write~~ B

Reasons The wasteland is smelly and dirty and most people don't want to live nearby. This in turn provides land for poor people who only can live on land where people don't want and they can get things they need from the garbage for living.

Location D

Reasons Marshlands are often to wet and prone to diseases and ill health thus unwanted. Poor people again take such empty spaces where they don't need to pay rents, here they can also get water for domestic needs. (4)

4





(iv) Suggest why people are moving from location B out towards locations A and C.

Due to the expansion of the City centre and the urban development, ~~maybe~~ the City authorities might have wanted to (remove those shanty areas) in B, slowly for space to expand or the land price went up so the owners wanted to drive people out of their previously unwanted land. (2)

2

(v) Describe the 'development spine' shown on Figure 6 and suggest why this development is in this location.

The development spine along the (offices, shops and apartments are developing along the main roads) with industrial areas growing around them. This is due to (better accessibility) to other places as the roads can bring in the workers & customers as well as bringing in & sending the finished goods.

2

(4)



<sup>higher quality</sup>  
(6) How do developments in the rural-urban fringe of cities in MEDCs (More Economically Developed Countries) compare with those in the rural-urban fringe of LEDC cities? Use examples to support your answer.  
<sup>low quality</sup>

In MEDC's the rural-urban fringe is due to the age and lack of space to expand the original CBD. The CBD is old and environment is polluted, living conditions are bad with appalling services. Thus people go out of the city looking for (better environment or space for locating new industries.) Thus the houses in rural-urban fringe are (very high quality) and only people with money can afford it. Services & transports & businesses are well developed to support those in need and to be located in pleasant / cheap land.

However in LEDC's, the rural-urban fringe is due to overpopulation of the city centre due to rural-to-urban migration. As there is no space in the city, the poor people forced to the outskirts and they cannot afford good housing (6) thus shanty towns come up. (Total 20 marks)

Leave blank

3  
Q6  
15

(Compare to open-spaced) TOTAL FOR SECTION A: 120 MARKS  
clean rural-urban fringe of MEDC's with gardens, L2-  
LEDC's, it is often very cramped and in appalling conditions without even basic sewage system.



M 2 3 0 4 6 A 0 2 1 3 6

21

Turn over

## Section B

This choice section of the paper saw the candidate correctly obey the rubric and opt for question 8 on Globalisation. This is the candidate's longest answer and where 20% of the paper's marks lie. The candidate gained over 80% of the marks available; a high scoring question in this section is essential if an A\* grade is to be attained. Section A success criteria equally apply to this section too but this section also looks for candidates to appreciate contemporary issues, trends and conflicts. It was clear that this candidate was fully conversant with the interdependence idea that underpins globalisation, and with the nature of sustainable development as it relates to the operations of global companies. More specifically, the candidate was familiar with the terms introduced in (a)(i) and was able to use map information in order to clarify meaning. The candidate was also able to predict reasonable consequences of the global shift on the international trade and economies of the emerging Asian industrial powers. Suggesting valid effects of an action is a feature of top grade candidates. Parts (b)(ii), (c)(i) and (c)(ii) were well answered and demonstrated the value of good geographical knowledge. These answers also demonstrate the candidate's ability to develop answers into full reasons e.g. (b)(ii), and full definitions e.g. (c)(i). It is interesting to note how the candidate responds in a 2 mark rather than 1 mark way in both parts of (c).

The candidate finishes with a solid rather than spectacular response. There are named examples and technical information but a little lack of relevance and focus resulting in a top Level 2 mark award. Overall, question 8 shows many of the hallmarks of a top grade script: up-to-date geographical knowledge, detail and explanation of trends and processes.

8. Globalisation

(a) Study Figure 8a, which shows the movement of jobs from the UK (United Kingdom) to China and India. This is an example of globalisation. Figure 8a also contains information about the GNP (Gross National Product) of China and India.

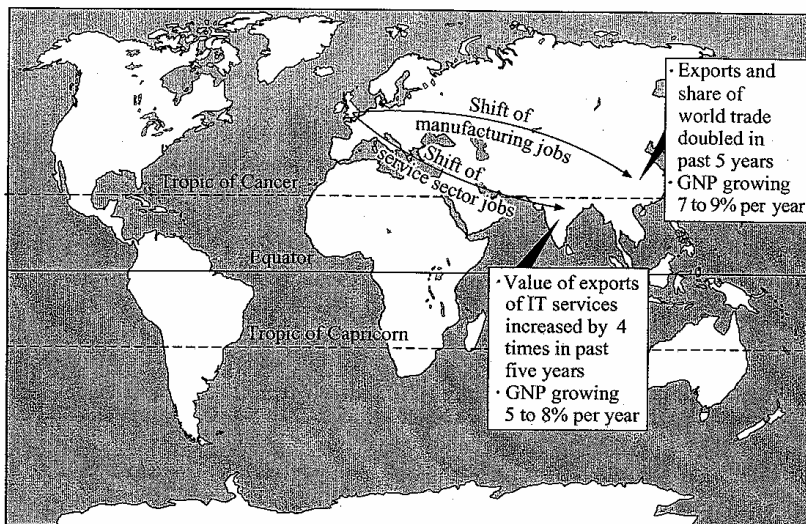


Figure 8a

(i) What evidence in Figure 8a suggests that China and India are experiencing:

1. an export boom
2. economic development?

1. *The increase in exports by 4 times in 5 years in India and China's world trade share & export share doubled.*

2. *The GNP growth of 5-8% annually in India and 7-9% in China.*

(2)

(ii) What term is used to describe the movement of manufacturing to countries like China?

Outsourcing

(1)



(iii) Suggest how the movements shown in Figure 8a may change the trade patterns of China and India.

For the past years, as LEDC's which lacked technology and finance to develop their own industries, China & India had to export cheap raw materials like cotton to MEDC's and import expensive secondary goods like machinery, resulting in low trade share and high trade loss. However, (due to movement of jobs from countries like UK, now the proportion of exporting of primary goods and imports for secondary goods would be reduced) Instead, China would export secondary goods more (4) while India would have more of tertiary services. (4)

(b) (i) Suggest how moving jobs from the UK to China or India might benefit:

1. the UK

The prices of services and goods would be cheaper as the cost of labour, raw materials and production is reduced due to cheap labour of LEDC's and low price rates of those countries. (2)

2. China or India

They could solve unemployment problems due to increased jobs and more business can flourish due to investment from other countries. This would create multiplier effect which can develop the country drastically with support services & infrastructure built up. (4)



M 2 3 0 4 6 A 0 2 7 3 6

(ii) Describe two factors that enable companies to have parts of their business located in different countries.

1. Increased accessibility ~~between~~ among countries due to (improved transportation) such as ~~airplane~~ ~~or~~ aeroplane, ships and cars. This (allows quick delivery of raw materials, documents and goods all over the world).
2. Development of high-speed communication system such as (Internet, telephone and video-conferencing). This allows speedy transfer of messages, instructions and any important changes to be delivered instantly.

(4)

(c) New service sector jobs in India are often located in business parks outside the main cities. Texas Instruments, a transnational ICT company, is located in the Information Technology Park, Bangalore, India (Figure 8b).



Main features of the Information Technology Park:

- Space for offices, shops, homes, parks
- 18 km east of Bangalore
- 20 minutes from airport
- Modern buildings, power supply, communications
- Designed for technology-orientated companies, including large transnational companies
- India's first science park

Figure 8b

(i) What is a TNC (transnational company)?

A TNC is ~~big huge multinational~~ multinational companies that operates in various countries regardless of ~~how~~ national boundaries. e.g. Ford

(2)



(ii) Describe **one** advantage and **one** disadvantage that TNCs bring to countries like India.

Advantage..... TNCs bring creates many jobs and trains the local people. This give them income to improve their living standard and job prospects for young people creating opportunities..... 2

Disadvantage..... TNCs are sometime to huge and powerful for small local firms to compete. Thus it can disturb or prevent small companies from growing up and act as monopolies with little competition..... 2

(4)



(iii) Using named examples, explain the importance of TNCs in globalisation and the global economy.

(Mitsubishi & Proton) - TNCs (bring in technologies and machines) from MEDCs to LEDCs. This allows the countries to share the knowledge and LEDCs to take advantage of more developed techniques and be ~~more~~ competitive with MEDCs. The TNCs (bring in finances and investment) that re-generates the country or regions. The investment creates jobs and improves infrastructure which creates a (multiplier effect) for other local businesses to grow and allow LEDCs to develop economically to reduce the gap between poor North and wealthy South, e.g. Brazil economic miracle in 1970s.

Moreover, the TNCs ~~improves~~ (improves trade balance) of LEDCs which ~~are~~ often suffer from huge import bills with little exports. This is done by producing goods in LEDCs and exporting them as 'made in XX' thus increasing the countries trade shares of the world, ~~also~~ to change the imbalance of trade of the world (only 25% of population in MEDCs holding 80% of ~~the~~ world trade shares.) e.g. Panasonic produced in South-east Asia.

TNCs are also playing an important role (Total 30 marks) in connecting ~~the~~ different countries through banking operations and trades of their goods. (e.g. British ~~telecom~~ telecommunication service) outsourced to Indian companies

6  
Q8  
25

L2+





## Paper 2H

### A grade C script

#### General comments

Broad competence in meeting the demands of most questions is the hallmark of this grade on the higher tier at IGCSE. This script, which is of minimal grade C quality, reveals as many do at this grade considerable variability and patchiness of quality, though no question was answered at a very low standard.

The candidate achieved 60% of the available marks in 4 of the 6 section A questions; the remaining 3 answers, especially the response to the longer section B question, dipped below this respectable standard. The answers generally demonstrate that the geographical context of the question has been grasped, but that the answer has either not been fully developed or not totally focussed on the question set. Broad understanding and some basic knowledge of the topic are evident throughout the script, but many answers lack depth and description. Appropriate points are often simply listed rather than developed into descriptions or explanations.

#### Question-specific comments

Annotated comments have been added to the body of the following script, some illustrating the general remarks made above.

SECTION A

Answer all six questions.

1. Water

(a) Study Figure 1, which shows the hydrological cycle of a drainage basin.

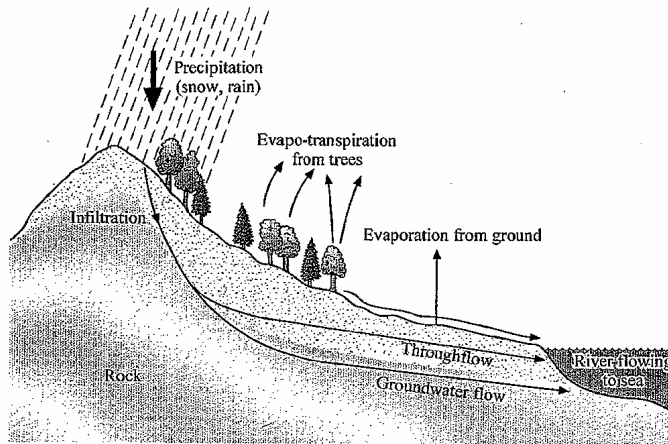


Figure 1

(i) Name one store of water shown in Figure 1.

*(Sea) or river*

(1)

(ii) What is the difference between throughflow and groundwater flow?

*Throughflow is when the water travels down underground rivers. Groundwater flow is when water travels through underground rivers in rocks.*

*Throughflow is when water travels through water soil.*

(2)

Comment:  
Distinction soundly made



Leave blank

(iii) Describe the transfer of water through a drainage basin. Start with the input of water as precipitation.

Water is ~~either~~ moved down from higher ground due to gravity. It finds its way into streams or tributaries then flows down river into a lake or sea.

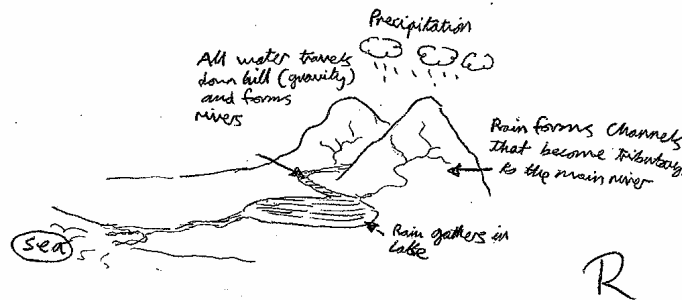
Comment:  
Very limited with most of cycle left untouched

(b) (i) What term is used to describe the volume of water in a river channel?

mass...?

(1)

(ii) Draw and label a diagram to show how a river is part of a drainage basin.



Comment:  
Pity but crucial drainage basin concept not addressed

(2)



M 2 3 0 4 6 A 0 3 3 6

3

Turn over

(c) (i) Explain the main physical causes of river flooding.

Heavy rainfall or ice caps melting can cause a river to flood its banks due to too much water being put in for the river to carry.

Comment:  
Good understanding (2)

2

(ii) Suggest how human activities in a drainage basin can help to cause flooding.

(Deforestation) means that there shall be less infiltration so more water shall reach the river.

(Farmland) farmland also leaves the land bare, farm animals eat away alot of vegetation.

The spread of towns and cities means that most rainfall is sent down drains leading directly to the river.

(3)

3

(d) For a named river management scheme, describe and explain its purposes.

Name of river management scheme: (Rance electrical water company)

It is a hydroelectric dam it is situated at the mouth of the river. It is mainly there as a source of electricity.

It also keeps a reserve of fresh water which is used by water companies further up river.

lots of trees have been planted by the company to increase evap-transpiration and infiltration.

The Rance has not only become a source of electrical power

It has also attracted many species of wildlife.

L2

3

Comment:  
Not best example chosen. Points not always relevant thrown at the answer so that the focus on purposes essentially lost

(6)

Q1  
12

(Total 20 marks)



2. Hazards

(a) Study Figure 2, which shows the island of Montserrat (West Indies) before and after the Soufriere Hills volcano erupted in 1997.

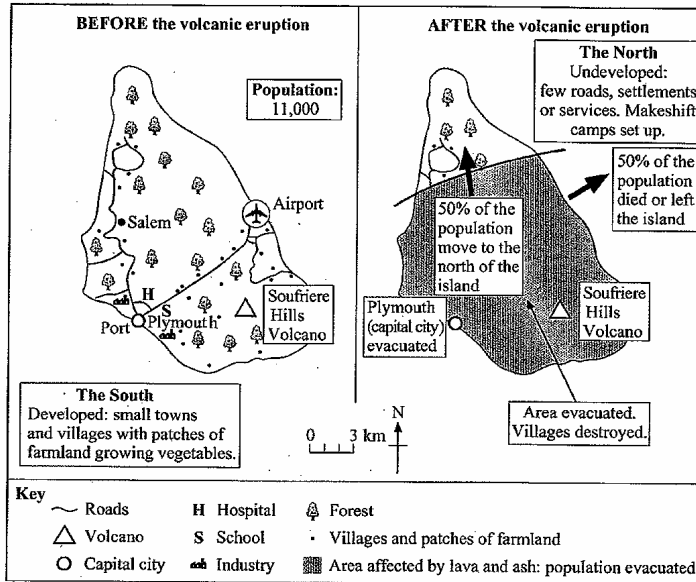


Figure 2

(i) Compare the impact of the eruption in northern Montserrat with that in southern Montserrat on:

1. Landscape *In the north it very rural with lots of forests and a few villages and farmland. The south was much more developed. The capital city, airport and many villoges were destroyed by the eruption.*
2. Population *most of the population in the north seemed to be unaffected by the hazard. In the south 50% of the population were either killed or left the island. Another 50% of the population fled to the north.*



Leave blank

3. Transport *There are only a few roads in the north...*  
*most of the good communications (i.e. airport and port)*  
*were destroyed by the volcano.* ✓

4

Comment:  
Some unbalanced responses ignoring one part of the island

(6)

(ii) Give one short-term effect and one long-term effect of the eruption.

1. short-term effect *Homeless people who have lost their*  
*jobs.*

2. long-term effect *possibility of diseases due to most*  
*of the services (e.g. hospitals) being destroyed.* ✓ X

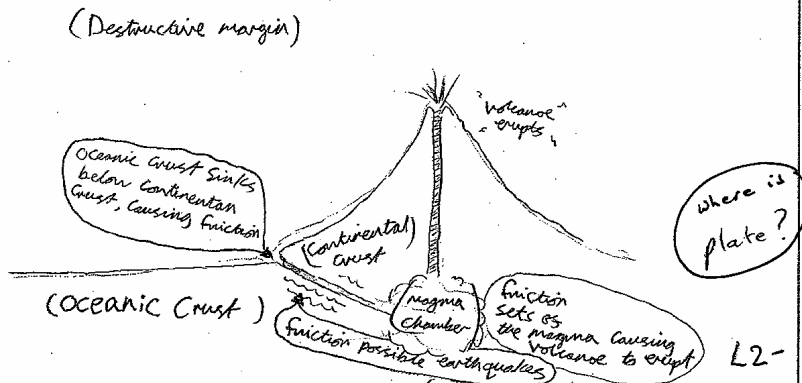
(2)

2

6



(b) Using an annotated diagram, explain why volcanoes exist at plate boundaries.



Volcanoes mainly occur at (destructive) or conservative plate margins. Destructive margins are when two plates collide this causes a lot of friction and thus causes eruptions.

Conservative margins are when two plates move slowly past each other (e.g. the San Francisco fault). This causes them to rub each other and cause also due to a lot of pressure and friction. This triggers off an eruption.

Comment:  
Rather jumbled and confused answer

(v)



7  
Turn over

Leave blank

(c) Referring to at least one named example, describe how people prepare for and respond to volcanic eruptions.

Named example(s) Mount. Etna

Nowadays most people who live by a volcano or other disaster areas have a (safety drill) so if a volcano erupted they would know where to go and what to do.

Italy can probably put alot of money into (Special Volcano detecting machines) These can sense the slightest earth tremor, so most people should know when a volcano hits.

Special (safety areas) have been set up so people can flee to them where they can receive food and other important supplies.

Emergency services will always be ready and they too shall have (special drill) in such a hazard struck.

L2-

3

Comment:  
Amounts to a list of loose measures  
Not well linked to named examples

(6)

(Total 20 marks)

02

12

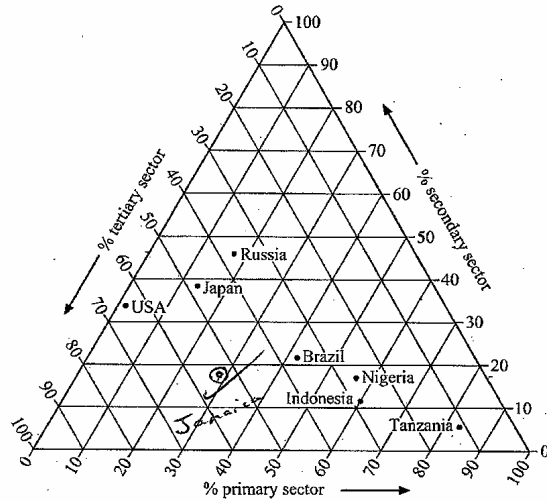
8





**3. Production**

(a) Study Figures 3a and 3b, which show employment in the three economic sectors of a sample of countries.



**Figure 3a**

Country	Percentage of workforce employed in			Level of economic development
	Primary sector	Secondary sector	Tertiary sector	
Tanzania	83	6	11	LEDC (Less Economically Developed Country) ↑ ↓ MEDC (More Economically Developed Country)
Indonesia	60 ✓	40	28 ✓	
Nigeria	56	17	27	
Brazil	41	22	37	
Jamaica	28	17	55	
Russia	17	47	36	
Japan	13	39	48	
USA	2	33	65	

**Figure 3b**



9  
Turn over

(i) Use information from Figure 3a to complete Indonesia's entry in Figure 3b. (2)

1

(ii) Use information from Figure 3b to plot the position of Jamaica on Figure 3b. (1) *A*

1

(b) Name **one** occupation that is typical of each of the following three sectors:

- 1. Primary sector *Farming* ✓
- 2. Secondary sector *car manufacturing* ✓
- 3. Tertiary sector *Shopping mall* ✓ *A*

(3)

3

(c) As a country develops economically, its employment structure changes. Use information from Figures 3a and 3b to explain this statement.

*A country does not develop economically by just making raw materials and people do not earn a great living in (primary activities (in LEDC's)) Secondary activities are mainly to do with industry. This gives better goods to trade and people usually get a fixed wage and are trained for different jobs. This bring alot of money to the country so now it can do ~~see~~ tertiary activities. These are much richer and better goods and jobs. More people go for (tertiary activities in MEDC's) seeing (4) as most jobs are well paid and advanced than the others.*

2

**Comment:**  
**Question set not directly answered.**  
**Explain how employment changes when...**



Leave blank

(d) Farming in some LEDCs (Less Economically Developed Countries) fails to prevent food shortages.

(i) Explain why such shortages occur.

In some LEDC's the population is so big that the demand for food is greater than the amount of food being produced.

Also places such as Bangladesh sometimes (flood). This ruins crops as does severe (droughts) and other extreme elements.

Comment:

A good example of mere lists rather than explanation

(4)

2

(ii) For one named LEDC, describe two attempts that have been made to increase food supply.

Name of LEDC: Kenya

1. (Better farming equipment) such as tractors and combine harvesters. (Doubles the speed of most work) e.g. plowing with cattle.

2

2. The (use of chemicals and fertilizer and pesticides) this may help (plants to grow better and protect them from common pests) but the use of chemicals can poison water as can pesticides.

2

4

Comment:

Valid but lacks Kenyan detail

(6)

(Total 20 marks)

Q3

13



Turn over

4. Development

(a) Study Figure 4. This shows information about the South West region of the UK (United Kingdom) in 2000, including wealth, indicated by GDP (Gross Domestic Product) per person.

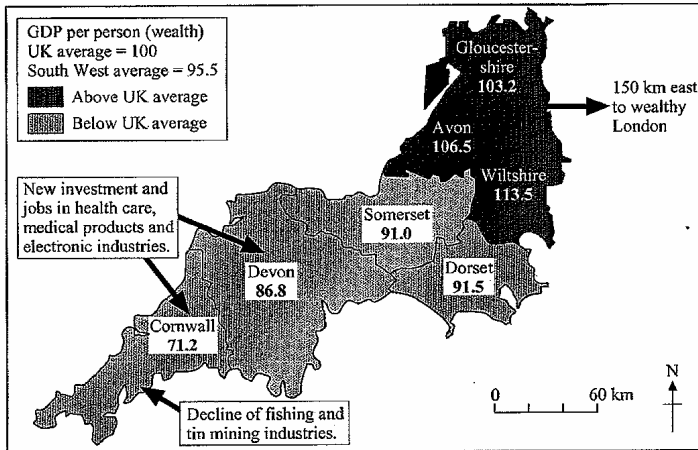


Figure 4

(i) The South West region is one of the less economically developed regions of the UK.

What evidence is there to support this claim?

*Cornwall has less fewer jobs and medical products in health care. Fewer investments and electronic industries. There is also a (decline in fishing and tin mining). Most of the people will move to somewhere where they can get better jobs. It is quite a (remote part of the UK) and has (less GDP per person than most of the other areas.)*

Comment:  
 Data evidence missing

3

(4)



(ii) Describe the pattern of wealth (GDP per person) in the South West region.

.....  
.....  
.....  
.....

(2)

0

(iii) Using Figure 4, give two reasons to explain why Cornwall has the lowest GDP per person in the South West region.

1. Fewer jobs in health care and other advanced jobs. People (many) move or commute to other regions for better jobs.

2. Decline in the areas main source of business. Fishing and tin mining. Mines have become exhausted. Fewer fish.

(4)

2

(b) Apart from a low GDP per person, describe two other features you would expect in a less economically developed area.

1. GNP (Gross National Produce), the amount of money a person (on average) can make within a country. In this is low it shows that most people are poor R

2. High death and birth rate. This would show that medical care is poor and that there is no birth control. Large population most people die of diseases when they are young.

Comment:  
Poorly chosen features of areas of poverty

(4)



Leave blank

- (c) With reference to a named less economically developed area of a country other than the UK, explain why new investment and jobs are so important for development.

Named less economically developed area.....

.....

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Comment:  
Another example of sections not answered

(6)

(Total 20 marks)

0

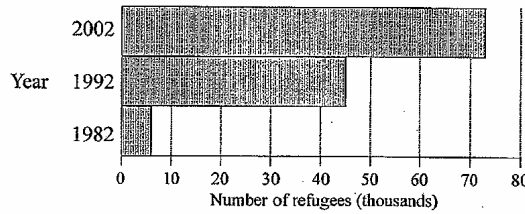
Q4

6



5. Migration

(a) Study Figure 5, which gives information about refugees entering the UK (United Kingdom) in 1982, 1992 and 2002.



Year	Main sources of refugees
2002	Iraq, Zimbabwe, Somalia
1992	Former Yugoslavian republics, Sri Lanka, Turkey
1982	Poland, Ghana, Iraq

Figure 5

(i) Describe how refugee migration into the UK changed between 1982 and 2002.

The amount of refugees (rose) from 5 thousand in 1982 to 72 thousand in 2002.

Comment:  
Good example of offering data to gain second mark

(2)

(ii) Referring to refugees, explain how forced migration differs from voluntary migration.

Forced migration is when people are forced to leave for political reasons (wars or for things) such as shortages of food.  
Voluntary migration is when people migrate for a better way of life personal reasons or for jobs.

Comment:  
Max. marks awarded despite explicit reference to refugees missing

(3)



(b) (i) Suggest **two** reasons why some of the refugees shown in Figure 5 might seek asylum in the UK.

*Better way of life, more jobs or better education.*

Comment:  
**Factors not reasons. Needs development**

(2)

(ii) Suggest why some refugees may later feel that they made the wrong decision in seeking asylum in the UK.

*Better way of life is poor. Bad living <sup>conditions</sup> and badly paid jobs. (Far away from family (homesick))*

(3)





Leave blank

(c) (i) Explain the push-pull model of migration.

Push factors are when migrants people are forced to leave due to, for example, wars. ✓

Pull factors is what makes migrants want to migrate, it might be for a better way of life. ✓

This how we find out why people migrate.

2

Comment:  
Not explanation but throwing vague ideas at the answer

(4)

(ii) Use the push-pull model to help explain one named international migration.

Named international migration ... the (Jews to Israel)

The Jews migrated to Israel because it was their (new country where they could live and start a new life) there were mainly pull factors. L1+

2

Comment:  
Pity because a good example named

(6)

(Total 20 marks)

Q5

1 1



17  
Turn over

6. Urban Environments

(a) Study Figure 6 which shows part of a mega-city in an LEDC (Less Economically Developed Country). Four typical shanty town locations are marked A, B, C and D.

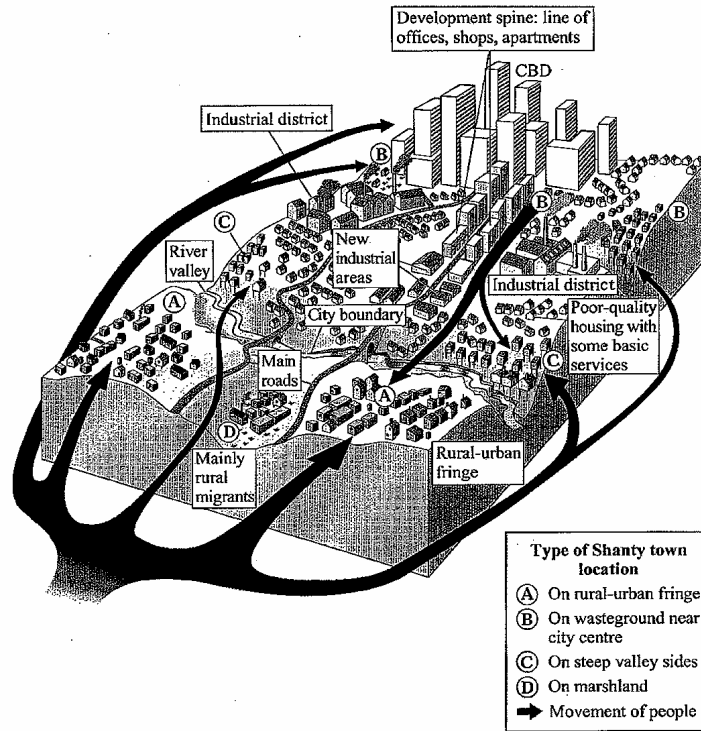


Figure 6

(i) What is a shanty town?

A shanty town is a squashed area of poor housing mainly made out of rubbish. They have no services such as fresh water or electricity (well most don't).

Comment:  
Doesn't really capture the essence of shanties i.e. squatters in makeshift accommodation

(2)



Leave blank

(ii) Explain how shanty towns contribute to the growth of mega-cities in LEDCs.

Most poor people migrate to cities in search of jobs. They can only afford to live on the cheap unwanted land on the outskirts of the city. So large shanty town estates are formed.

(2)

(iii) For two of the locations marked A, B, C or D, give reasons why a shanty town is located there.

Location D

Reasons unwanted waste land only place poor people can afford to live. Much land is cheap and cannot be used for farming.

2

Location B

Reasons unwanted derelict land. It is located near an industrial district.

1

(4)

Comment:  
Along the right lines but no development



19

Turn over

Leave blank

(iv) Suggest why people are moving from location B out towards locations A and C.

.....  
.....  
.....  
.....

(2)

(v) Describe the 'development spine' shown on Figure 6 and suggest why this development is in this location.

.....  
.....  
.....  
.....  
.....  
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.....  
.....  
.....

(4)

Comment:  
Again, section not answered



Leave blank

(b) How do developments in the rural-urban fringe of cities in MEDCs (More Economically Developed Countries) compare with those in the rural-urban fringe of LEDC cities? Use examples to support your answer.

Urban housing is much better in MEDCs. They are properly ~~planned~~ (planned housing estates) with good services... e.g. Fresh water, electricity.  
The urban (housing found on the fringe of LEDCs is very poor) It is not planned. Most people live in very bad conditions without valuable amenities such as fresh water or sewage systems.

L1+

2

Comment:  
Vague and poorly focussed comments. Not the key contrasts envisaged by the question. LEDC shanty development versus commercial development on the R.U.F. of MEDC cities

(6)

Q6

(Total 20 marks)

7

TOTAL FOR SECTION A: 120 MARKS



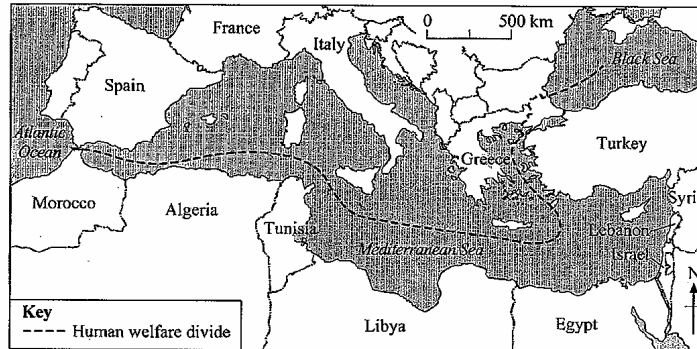
21

Turn over

Leave blank

9. Human Welfare

- (a) Study Figure 9a, which gives two human welfare indicators for countries around the Mediterranean Sea.



Country	Human welfare indicator	
	Health: number of patients per doctor	Literacy: adult literacy rate (%)
Spain	360	96
France	421	99
Italy	552	97
Greece	340	93
Turkey	1385	90
Syria	1354	65
Lebanon	1390	80
Israel	234	96
Egypt	5419	49
Lybia	3950	62
Tunisia	2127	65
Algeria	8400	58
Morocco	2120	45

Figure 9a

- (i) Suggest why the human welfare divide line has been drawn between countries north of the Mediterranean Sea and those to the south and east.

*The North is mainly MEDCS while the south and east is mainly LEDC's*

Comment:  
A second mark was available for development or a second point

(2)



31

Turn over

Leave blank

(ii) Explain why literacy and health are often used as indicators of human welfare.

Health is to show what state the medical services are in.

Literacy is to show how many people can receive education.

R

0

(4)

(iii) Suggest why the human welfare divide line does not give a full picture of human welfare differences around the Mediterranean Sea.

(4)

0

Comment:  
Disappointing on a choice question



Leave blank

(b) For a named country, describe how human welfare varies between its regions.

Named country Brazil

The (south east coast of Brazil is home to the wealthiest regions). Most people live a rich life in the (large coastal cities) that bring in alot of money from (tourists).  
Mind you a greater part of Brazil is poor. Most people do not receive as much government aid or attention than the richer regions.

✓

2

(4)

Comment:  
Good example chosen but let down by lack of place-specific knowledge

33



Turn over



(c) Study Figure 9b, which shows some responses to the difficulties caused by flooding and debt in LEDCs (Less Economically Developed Countries).



Figure 9b

(i) What is meant by the term aid?

*Aid is help from other countries. It could be food, money, raw materials or specially trained personnel, e.g. doctors.*

Comment:  
Quite well done

(3)

2

(ii) Explain why agencies and organisations in MEDCs (More Economically Developed Countries) provide aid for LEDCs.

*MEDCs have lots of money and equipment which they can spare. They also need raw materials from the "poorer" south.*

*Also for*

Comment:  
Valid but sketchy. Not untypical of C-grade candidates

(4)

2



(c) Describe how aid and trade might be made more appropriate for LEDCs.

.....

.....

.....

.....

.....

.....

.....

.....

Comment:  
Was this the wise choice of question in Section B?  
Candidates are advised to choose the question on which they can do the final 9 marks.

.....

.....

.....

.....

.....

.....

.....

.....

(9)

(Total 30 marks)

0

09

7

TOTAL FOR SECTION B: 30 MARKS

TOTAL FOR PAPER: 150 MARKS

END



35

## Paper 3

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### Attainment at grades A and A\*

An answer awarded an A\* for IGCSE can be distinguished from that achieving an A grade by the depth of knowledge and understanding demonstrated by the candidate. Examples of responses to questions from the May 2005 paper are used here to illustrate the contrasts in answer quality.

**Question 1** commenced by asking candidates to use their geographical skills to select the correct words to complete sentences. An A\* candidate displayed the ability to use compass directions, scale lines and to apply knowledge. A typical lower A grade response failed to use one or more of these aspects:

*'The straight line distance between Carseri and Kipini is oxbow lake.'*

Section a (ii) required candidates to describe the location of flood prone areas. Very high level answers included exact locations and considered the extent of flooding, as shown by the following extract:

*'The upper parts of the two tributaries are also prone to flooding until the middle of the streams. one area, 50km from Kisiki is also likely to flood'*

In contrast, a typical A grade response demonstrated less detailed use of compass directions and distances:

*'The area likely to flood are those near the River Tana, most of the area along the river , coming down, passing Bura, Carseri and Kipini.'*

Both A and A\* candidates showed similar skill in completion of the graphs in (b) and c (i), however questions c (ii) and (iii) enabled the A\* candidates to develop their answers analytically and to use an extended geographical vocabulary:

*'There were natural disasters such as severe drought in 2000 and severe floods in 1998. These either destroyed the crops or prevented farming of next crops.'*

A typical A grade response failed to use such specific terms, and lacked depth of analysis:  
*'Because probably the wheather wasn't so good for planting rice, or the new irrigation scheme that was built didn't work so well due to human mistakes, maybe there was too much irrigation or too little'*

**Question 2** began by asking candidates to use their geographical skills to label a map and to carry out a basic map reading exercise. These were completed competently by both the A and the A\* students. Sections (b) and (c), however, discriminated between the candidates. While all the candidates were able to complete the flow map, the A\* responses showed greater ability to make in depth conclusions from the observed patterns:

*'The most number of people are from Liverpool, which is quite close to the centre and Bristol which is the furthest from the centre. From Shrewsbury, despite the fact it is the closest, only 3 people visit. From Cardiff and Birmingham, maybe due to the distance (175 km and i45km) the least no. of people come'*

The A grade candidates tended to make valid but much more generalised statements:

*'the students would learn about where visitors come from ( the name of the town), how many of them come from a given town and how much distance they had travelled to reach Trawsfynydd visitor centre and from which town there is great demand for recreation'.*

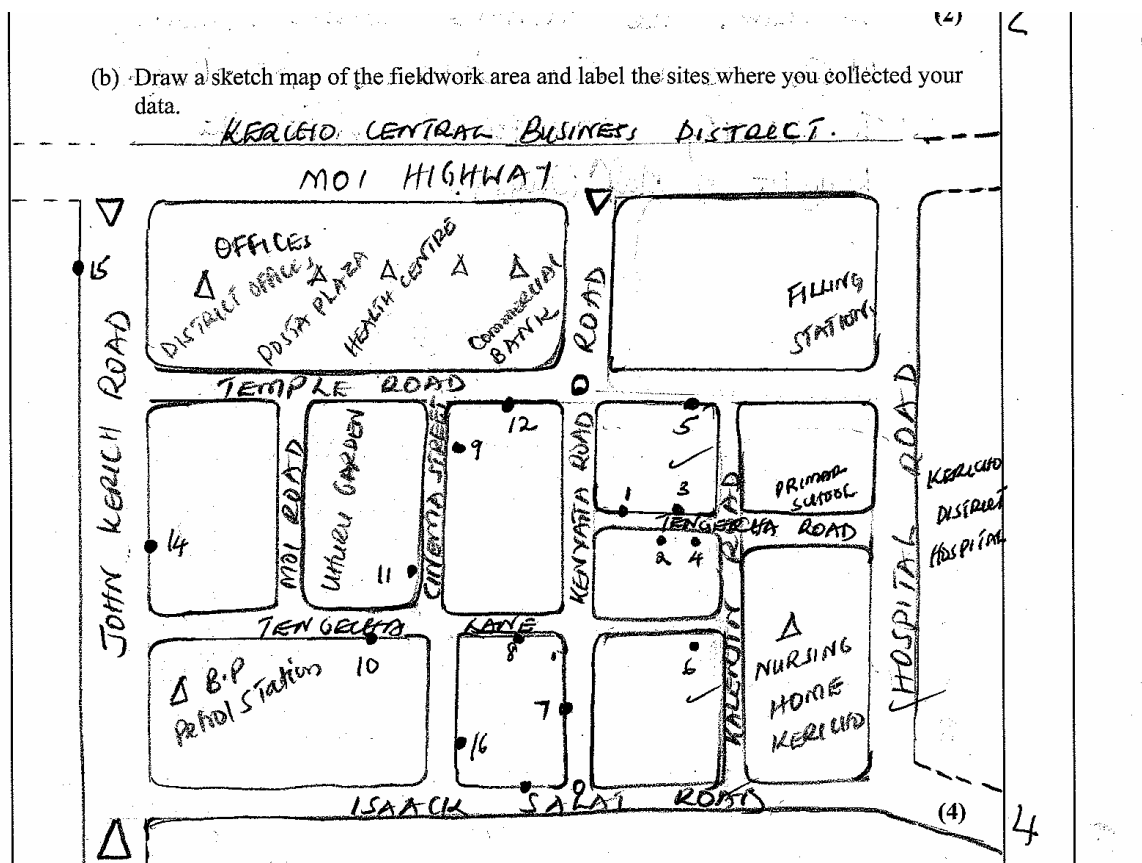
A similar pattern was evident in section (c) where both A and A\* students showed competence in completing the scatter graph, but the A\* candidates were able to demonstrate the ability to draw sophisticated conclusions and to appreciate any anomalies:

*'The relationship is positive correlation. The shorter the distance travelled, the shorter the visitors stay in that area e.g. 20km and 35km people only stay one day. The greater the distance travelled, the longer they stay e.g. people travelled for 200km and 185km stay for 12 days. the only abnormality is No. 5, where people travelled for 85km stay for less days than people travelled for 80km'.*

The A grade candidate tended to make correct but less developed conclusions, and not to comment on any variations from the general trend:

*'The further distance travelled to the visit centre (e.g. 200cm) the longer their stay is going to be (e.g. 12 days. The shorter distance travelled to the visitor centre (e.g. 20cm) the shorter their stay is going to be (e.g. 1 day).'*

Question 3 required candidates to use their own experience of fieldwork. The A and the A\* candidates were able to demonstrate clear understanding of the aims of the investigation. In addition the A\* students were able to construct highly detailed and labelled maps of their fieldwork areas.



The maps produced by the A grade students tended to lack such specific location information.

In section (c), the A\* students gave full justification for their selection of the data collection sites:

*'1. The water was relatively shallow and the current was not flowing so fast. Thus it was safe enough to go in and measure.'*

*2. 'There were less obstacles such as bushes or rocks that were disturbing the flow of the water, thus simpler and easier to measure than other spots'*

The A grade students provide less convincing reasons for their site choice, and were sometimes unable to extend their answers beyond a simple statement that they had selected the only suitable site:

*'This was the only area of the factory where we could do our observation'.*

Section (d) required the candidates to comment on their data collection under the headings of equipment, techniques and sampling procedures. A\* students were able to describe the equipment and techniques in detail and offer some justification for their selection:

*'We needed to make recording tables for the width of the channel..... graduated poles to measure the depth of the water/channel; and a spirit level to make sure that the tape and strings are horizontal'*

Candidates achieving an A grade did not develop their explanations in depth but provided a more basic outline of the equipment and its use.

*'I used questionnaires, tax disc surveys, took photographs and drew sketch maps to collect the data I needed.'*

Very few candidates understood the concept of sampling, and even those achieving A\* and A elsewhere on the paper frequently failed to gain marks for this section.

Candidates were asked to explain how they ensured that their data collection was as accurate as possible and to comment on how their data collection might be improved. A\* students were able to suggest, describe and justify their collection, and to write extended answer suggesting improvements:

*'For the speed of the river we repeated the process 10 times and got the average of the results to ensure that we got the most accurate result. For measuring the channel width two groups performed it separately so the two results can be compared and get the average.'*

In comparison, A grade candidates were able to suggest ways of improving accuracy, but were not always able to show how they made their data collection reliable:

*'To make sure my data was correct and accurate, I compared results with other students, re-did some of my data collection and moved positions frequently when asking questions to get a thorough view of my findings.'*

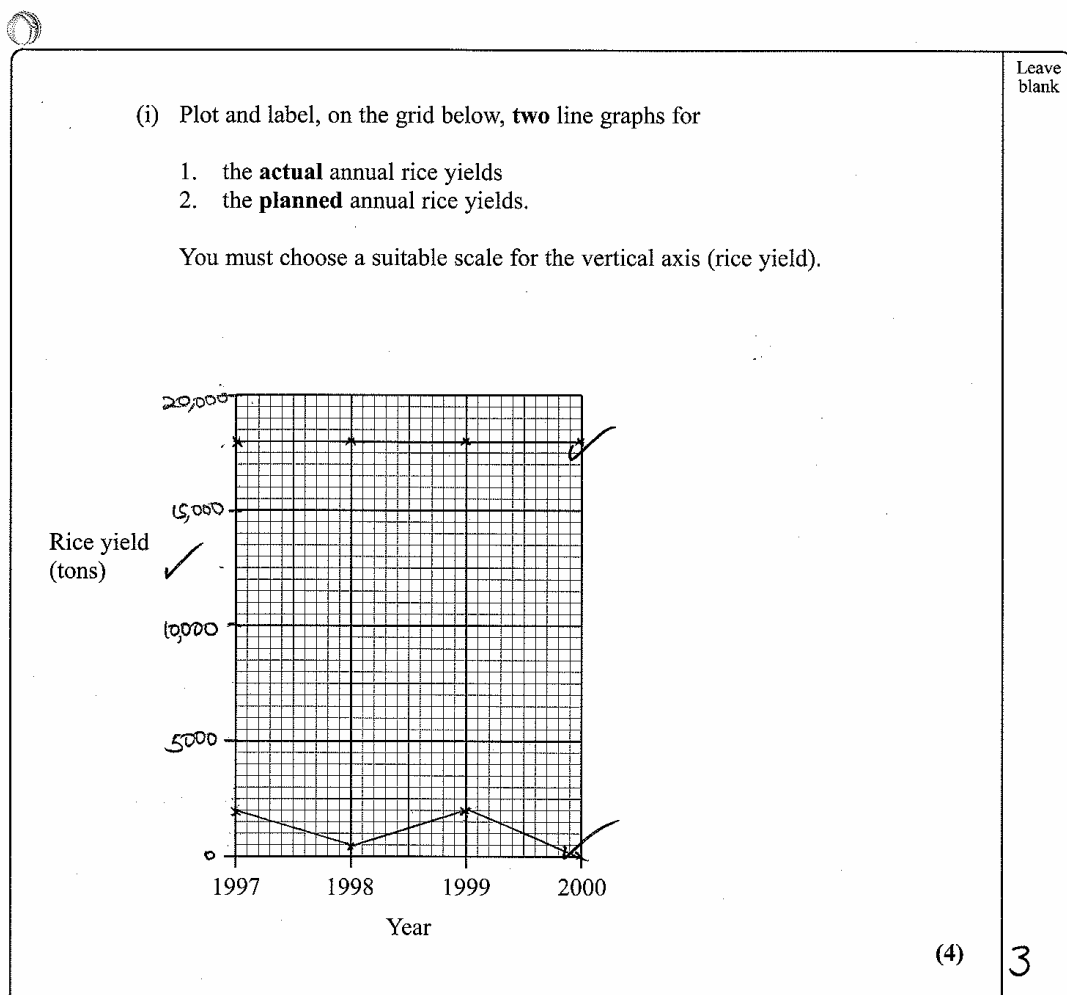
## Attainment at grades C and D

Candidates were awarded either a D or a C grade depending on their geographical skills and their ability to demonstrate understanding of processes of recording, analysing and making conclusions from a range of resources. A typical C grade student was able to develop their answers beyond the simple statements and repetition of information from the resources which were common in D grade responses.

Both D and C grade candidates were able to complete the majority of the sentences in a (i), and to offer simple descriptions of the flood prone areas in (ii):

*'They are mainly between roads and the boundary of the River Tana District.'*

Similarly, both sets of students showed competence in completing the graphs for sections (b) and c (i), although the C grade candidates were more likely to label their graphs or to include scale lines, as shown below.

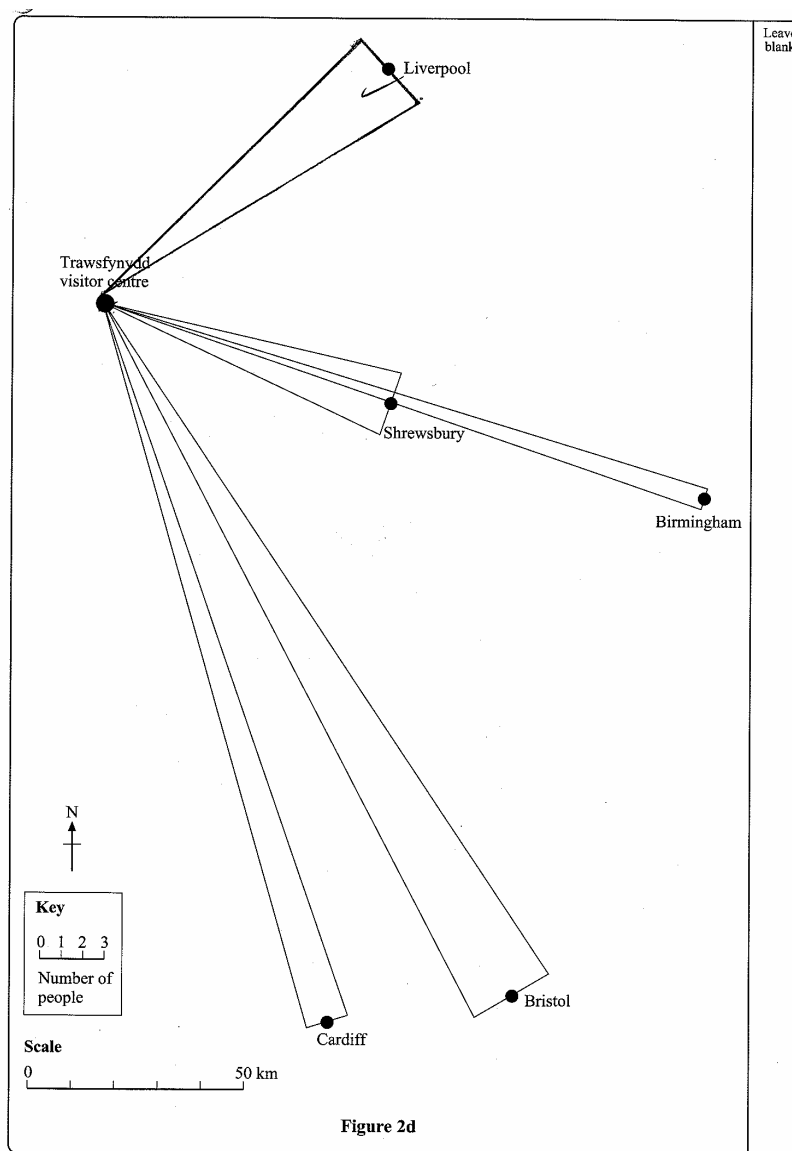


C grade candidates were able to make creditable responses to c (ii) and (iii) sections:  
*'It might have flooded in that area meaning the irrigation scheme couldn't deal with it.'*

The D grade students tended to either ignore these sections or leave the answer space blank, or to write responses that did not answer the question. The following is a typical answer to (iii) where candidates were asked to identify and explain the limitations of the data collected:

*The new irrigation scheme favoured only one type of rice grown i.e. Actual annual rice but not planned annual rice.'*

The early sections of question 2 enabled both C and D grade students to demonstrate their skills in annotating a map, however both groups found it difficult to read the Ordnance Survey map and there was little to discriminate between answers in this section. However, those obtaining grade C were more successful in the accurate completion of the flow map and describing the patterns shown:



*'The visitors lived away from the centre. They travelled a long distance to reach the centre of information.'*

In section (c), both the C and D grade candidates were able to use their skills to complete the scatter graph. Those obtaining a C grade, however, could draw some valid, detailed conclusions about the relationships shown by the completed graph:

*'As the distance from the Centre increases, the length of stay (days) increases that is, distance is directly proportional to the length of stay.'*

The students awarded a D grade were likely to draw basic and brief conclusions:

*'The longer the distance travelled the longer the length of stay is.'*

Both groups of candidates were able to outline the aims of their fieldwork investigations and many could produce outstanding maps for question 3 (b). However, those obtaining the higher grade provided more detailed accounts of their data collection:

*'Counting and recording in travelling and in numbers i.e. counting those who enter the site or come from or pass by the site.'*

The candidates reaching a D grade were not able to extend their descriptions of techniques beyond simple statements:

*'ask a straight forward question to get a reasonable answer and efficient.'*

Section (e) required the candidates to explain how they ensured that their data collection was as accurate and reliable as possible, and to suggest ways in which their data collection might be improved. The students obtaining a D grade tended to make basic suggestions for improvement:

*'Writting down only the needed information. Only what is essential.'*

Those obtaining a C grade were able to expand on the improvements to their fieldwork but did not extend their responses to explain how these changes would improve their results:

*'We could have asked more people and may be gone into a bit more detail about what they were doing on holiday there.'*



## Component 4: Coursework

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### Attainment at grades A and A\*

The candidates achieving these grades for the coursework element of IGCSE Geography showed competence in all sections of their investigations. However, those gaining the higher grade demonstrated a clearer appreciation of the aims to be investigated:

*'In this coursework I will be investigating the question "How and why do the processes and landforms of a river change downstream?"'*

*My hypothesis is*

- *Velocity of the river will increase downstream*
- *Gradient will decrease downstream*
- *Bedload will decrease downstream*
- *Stream discharge will increase downstream*
- *Wetted perimeter will increase downstream*
- *Cross sectional area will increase downstream*
- *Hydraulic radius will increase downstream'*

The candidates obtaining an A\* located their study area in detail, frequently with the help of carefully constructed and annotated maps. They demonstrated planning skills and were able to justify the order of data collection.

The students gaining A grades were also able to show well developed and located coursework plans, but these tended to lack the clarity of the A\* accounts:

*'Hypothesis:*

- 1. There is a relationship between mean velocity and gradient*
- 2. There is a relationship between mean velocity and hydraulic radius*
- 3. There is a relationship between width and depth*
- 4. There is a relationship between distance and discharge*
- 5. There is a relationship between bedload shapes and size.'*

Both the A\* and the A grade candidates were able to explain and justify the methods used to collect their data, although a typical A\* student showed a greater awareness of the limitations of the data and was able to comment on the problems connected with its collection. Accounts were often accompanied by annotated photographs which provided locations and visual impressions of the data collection site.

#### **Method**

- Measure the length of the river then divide it by 10 to get points from where you will be picking out the rocks from.
- Then pick out a random rock from the measurement taken and measure the length width and height
- Depending on the size of the rock you choose which ruler to measure it with.



**Fig.5** This shows the size and shape of the bedload in the upper course.

#### **Strengths and Limitations:**

The limitations of this method are that when you measure out how far it is for you to pick out a rock, sometimes there is not a rock there so you move your hand around in other directions to find one. The problem with this is that you have then just changed the distance measured out for the correct results. Also the measuring tape usually was not held as straight and as tight as it should have been therefore the distance between each section of the rivers width was not constant. The strengths of this method is that the equipment was quite easy to use and it was very cheap as well.

The students obtaining A grades were able to provide some justification of their selected methods but these tended to lack the development and sophistication of the A\* coursework:

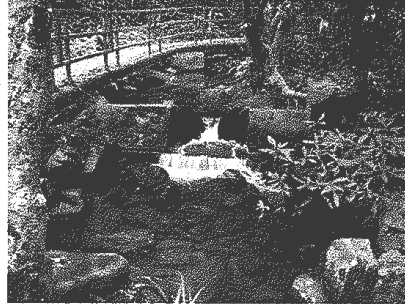
*'Reasons for using this method.*

*Although it might take some time to do the measurements because we need to submerge the tape totally to get accurate readings, but it is the easiest and the least costly method.'*

Assessment criterion 3, data presentation, enabled both groups of candidates to demonstrate accurate presentation skills and to use a wide range of appropriate techniques. The A\* candidates were frequently able to present their information in an original manner, as shown by the following example where the candidate has annotated a series of photographs showing the downstream changes in river characteristics.

# Photos

**Fig. 35** Here you can see that there is a waterfall and how there is a slight steepness in the landscape causing the water to flow faster in the upper course.



**Fig. 36** This is the size and shape of the bedload in the upper

Here you can see that the water is forced to find another route due to the large boulders and veget in the way.



**Fig. 37** Here you can see that the banks aren't as narrow as the upper course, there aren't as many large boulders and there is a larger volume of water.

The candidates were able to analyse their data in detail and use evidence to support their conclusions, as illustrated by this typical A grade response:

*'Referring to the graphs that I have done for the data presentation I can tell by looking at the bar graphs and scatter graph it has the greatest velocity in the upper course and lowest in the middle course.'*

The candidate was then able to consider their original aims and objectives and to make valid comments to justify their ideas:

*'I said there is a relationship between the gradient and the velocity which means the higher the gradient is, the faster it is for the velocity. My results actually prove my hypothesis.'*

The candidates obtaining A\* grades were able to extend their analyses and conclusions by cross references to specific diagrams, as required in criterion 5, and by indicating that their explanations might be incomplete:

*'My hypothesis stated that the river load will decrease downstream, Figures 35, 36, 37 and 38 shows that the bed load gradually got larger and you can see that the bed load was at its largest in the lower course, which in a normal river would be unusual but because of the steep valley and hill sides in the lower course, these boulders had fallen from those areas and landed in the lower course of the river..... There were a lot of possible readings and calculations that could have had human error that would have given an inaccuracy in the data collected.....I could have extended this study to make comparisons by measuring the river at different times of the year and at different times of the day.'*

## Attainment at grades C and D

A typical C grade piece of coursework located and introduced the study, outlined the hypothesis being investigated and indicated the sequence of data collection:

*'The third aim of this investigation is to determine the relationship between the width and depth of the river.'*

The aims provided by D grade candidates lack clarity, and a clear sequence of data collection was usually absent:

*'Our main aim on this trip was to find out about the vegetation and watercourses of Kuwait's deserts. In my opinion I think that this was well achieved by both students and staff. Also another big aim for this trip was for all of the geography students to experience exactly what we were studying in school.'*

In criterion 2, a D grade piece of coursework provided detailed information about the data required and the methods used to collect and record this information, but did not attempt to explain the choice of methods:

*'As we were taken to three different sites, we had to draw and concentrate on different details. After we sketched our drawings we moved to collecting our data. In order to collect our data we had to use ranging poles from one point to another, with a 30m difference in between. We placed our sediment into a plastic bag and named it after the person who collected it.'*

C grade candidates were often able to comment on their choice of data and to explain, in some depth, exactly how the data was obtained:

*'I believe that the higher the mean velocity the smaller the hydraulic radius. This is because less speed will be lost through friction.'*

### Equipment

- *Measuring tape*
- *Chain*
- *Mettre rulers*

### Method

1. *Check velocity is already known*
2. *Measure out wetted perimeter by using the chain*
3. *Divide width into 10 equal sections*
4. *Measure depth at each section*
5. *Divide cross sectional area by wetted perimeter'*

Both grades (C and D) showed the candidates' ability to use a range of methods to present their data. Methods used by the C grade students usually included titles, scales and sometimes figure numbers.

**The relationship between average depth and average width.**

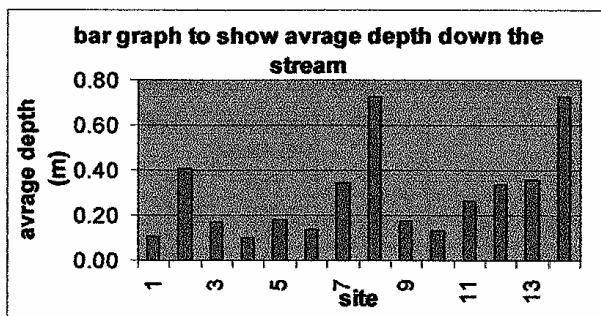


Fig 2.1 shows a bar graph of the average depth down the stream. As you can see from this graph after site 10 the depth has increased as I predicted. Generally throughout the whole river it generally followed this trend. Sites 2, 7 and 8 did not and had very high depths. This could have been caused by human influences or natural such as high discharge caused by rainfall which could lead to more of the river weathered away.

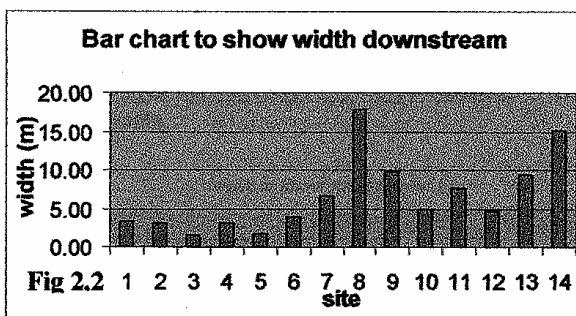
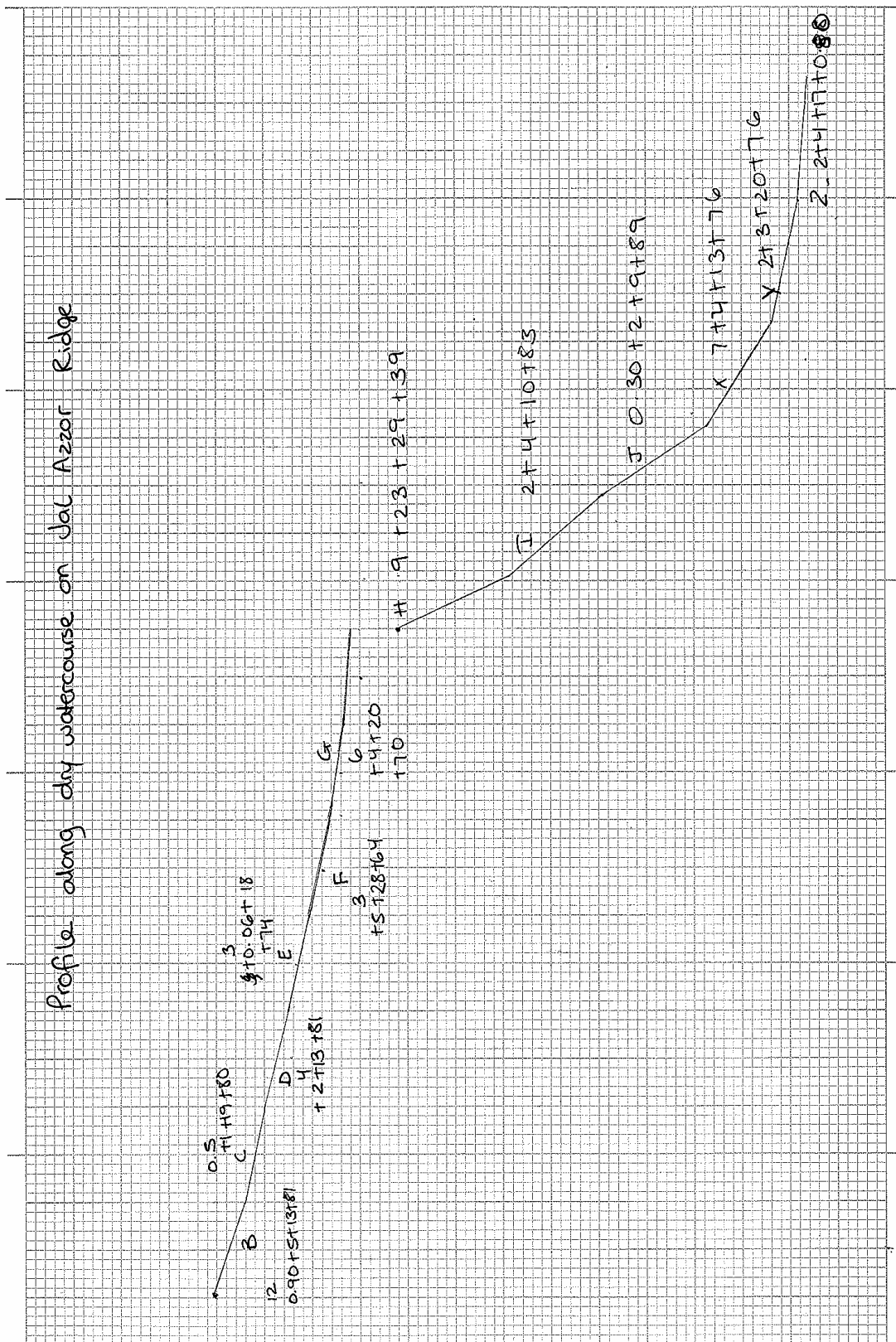


Fig 2.2 is a bar graph to show the change of width down the river. From this graph I can tell that the width has generally increased down the river as I predicted, with some exceptions as like the velocity graph site 8 did not follow the trend.

These details were frequently lacking from a D grade piece of work.



Candidates obtaining a C grade were frequently able to make analytical comments about their data, were able to draw conclusions and recognise limitations and were sometimes able to suggest strategies for improving and developing their studies:

*'In fig. 2.9 generally the hydraulic radius has increased as expected, but in this there were also many missing results which would cause in reliability this is mainly due to human error, some people were able to get sufficient results. But also parts of the river were hard to measure because of the surrounding environment. But this graph shows rouge (rough) result at site 7 where the hydraulic radius is higher than it should be.....We could have used sophisticated equipment like flow metres, but many we would not be able to use in such a shallow river.'*

A D grade piece of coursework tended to draw more limited conclusions and failed to suggest ways in which the study could be extended:

*'In this picture it shows another type of damage. It shows an eroded surface. This is due to the climate and human activity. The rainy season in Kuwait makes this half eroded surface become looser than before. You can work this out using a climate graph.'*

The C grade students tended to produce well-organised studies which showed evidence of logical thought. Page numbers and a contents page were usually present, and diagrams were frequently incorporated into the text.

# Contents Page

Page

1 – 2 Intro and aims

3 – 8 Hypothesis and methodology

9 – 12 Graphs and analysis

13 – 15 Zingg diagrams and analysis

16 Conclusions and Evaluation



However, this degree of planning and organisation was often absent from the D grade coursework. Despite containing some high quality maps and diagrams, the studies lacked division into separate sections, and pagination, contents pages and headings were usually missing. This limited the candidates' ability to score highly in criterion 5.



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