

**2005 Geography**

**Intermediate 1 – New Arrangements**

**Finalised Marking Instructions**

**These Marking Instructions have been prepared by Examination Teams for use by SQA Appointed Markers when marking External Course Assessments.**

## Geography

### Intermediate 1

#### New Arrangements

#### Physical Environments

#### Question 1

- (a)
- |                    |                   |
|--------------------|-------------------|
| Grampian mountains | Upland Glaciation |
| Yorkshire Dales    | Upland Limestone  |
| Snowdonia          | Upland Glaciation |
| SW England         | Coastal Erosion   |

four correct – 3 marks  
two or three correct – 2 marks  
one correct – 1 mark

**3 marks**

- (b) **Credit should be given for accurately drawn diagrams.**

eg

Limestone pavement – layers of sediment laid down under the sea bed millions of years ago to form limestone (1) then uplifted due to crustal movements (1). Ice sheets scraped away the top surface during the last ice age (1) exposing large areas of limestone to weathering/effects of acidic rain (1).

(Also give credit for an explanation of clint/gryke formation)

Pot hole – as limestone dries out over millions of years (1) vertical joints are formed (1). These joints in the limestone become widened by the effects of river erosion (1) and chemical weathering (1) to form pot holes (1).

Cavern – water makes its way down through joints or swallow holes (1). Where there are many joints and bedding planes (1) the limestone is dissolved by the acidic water (1) and a cavern is formed over millions of years (1). The cavern can be enlarged by the effects of flowing water (1) or rock collapsing from the cavern ceiling (1).

Stalactite – water dripping through the joints in the rock into the caverns contains calcium carbonate (1). As it drips slowly from the cavern roof it evaporates (1) to leave a small deposit of calcite (or dripstone) (1). These deposits grow downwards over the years to form a stalactite (1).

(Max 2 marks for explanation of stalagmite formation)

**3 marks**

**(c) (i) Mark 1:3, 2:2 or 3:1. Both map squares must be referred to for full marks.**

A – the river in this square is fairly narrow (1), is fairly straight (1) and is flowing slowly (1) in an easterly direction (1).

B – the river in this square is flowing very slowly (1) to the south east (1) with large meanders (1). It is wide (approx 150m) (1), tidal (1), with mudbanks exposed at low tide (1).

**4 marks**

**(ii) 3 x 1 marks**

Mixed woodland            3502

Housing                      4106

Farmland                    4197

**3 marks**

**(iii) Map evidence must be used for full marks, otherwise mark out of 2. Max 1 mark for grid reference.**

Accept human and/or physical features.

Wide slow flowing river is good for small boats (1), fishing (1).

Marshland at river mouth attracts birdwatchers (1). Visitors are attracted to old traditional villages such as Beaulieu (1) (3802) (1).

Mixed woodland attracts wildlife (1), good for walks (1). Long sandy beaches attract day-trippers (1).

Or any other valid point.

**4 marks**

**(d) Restrictions on housing and industrial development (1).**

Strict planning regulations (1).

Conservation and maintenance of old or historical buildings (1).

Employ park rangers to assist visitors and deal with problems (1).

Use of visitor centres to educate the public (1).

Restrictions on traffic control congestion (1).

Or any other valid point.

**3 marks**

## Human Environments

### Question 2

- (a) (i) 1 mark for each correct answer.
- |               |      |
|---------------|------|
| Power Station | 4702 |
| Works         | 4306 |
| Oil Refinery  | 4504 |
- 3 marks**
- (ii) Local residents – fumes from oil refinery causing air pollution (1) danger of explosion (1) visual pollution (1).  
Tourists – visual pollution caused by the industries (1) air pollution caused by fumes (1) puts tourists off from visiting the area (1) oil tankers cause pollution in Southampton Water (1) makes area unsuitable for sailing (1).  
Environmental groups – oil pollution damages habitat of plants and fish (1) hot water released from power station kills fish (1) increased lorries on roads causes air (1) and noise pollution (1).  
Or any other valid point. **3 marks**
- (b) (i) 1 mark for all points correctly plotted.  
1 mark joining plotted points with a line. **2 marks**
- (ii) The population of ELDCs has grown a lot faster than EMDCs (1) especially since 1950 (1). 1 mark for quoting figures. **2 marks**
- (c) **4 x 1 or 2 marks can be awarded for a developed point.**
- No mark awarded for naming city. If no city referred to, mark out of 3. A lot of people living in a small area (1) leads to disease spreading quickly (1) eg cholera (1). Lack of clean water (1) and inadequate sanitation (1) “houses” built out of scrap material (1) eg corrugated iron (1).  
Or any other valid point. **4 marks**
- (d) CBD – lack of room to expand (1). Lack of car parking spaces to attract customers (1) and expensive to park (1). High cost of rent and rates (1).  
Edge of city – large car parks (1) with free parking (1) room to expand (1) pleasant environment (1) close to a by-pass giving easy access for customers (1) and delivery lorries (1).  
Only 1 mark for a direct opposite statement. **3 marks**
- (e) Using a field for a caravan and camp site (1). Building a golf course (1) horse riding school (1) converting a farm building to a holiday home (1).  
Or any other valid point. **3 marks**

## Rural Land Degradation

### Question 3

- (a) Large population numbers put increased pressure on the land (1) through livestock grazing and crop farming (1). As numbers increase people farm in more marginal areas where rainfall totals are less (1). This results in the natural vegetation being removed (1) leaving the soil exposed and weak (1), easily blown or washed away when rains come (1). When the natural vegetation is removed and crops are grown year after year the soil loses its fertility and structure (1) and produces low yields (1). If rainfall is low and crops fail the soil becomes more vulnerable (1).  
Or any valid point. **3 marks**
- (b) Stone lines reduce the effects of desertification by holding back the topsoil during the rains (1). It stops the topsoil and valuable water from being lost (1) as the stones act like a dam and this holds the soil/water back (1). When this happens the farmers can plant crops and receive increased yields (1), this also puts a vegetation cover back on the soil (1) and prevents it from being blown away when the dry dusty winds come (1). Consider other techniques.  
Or any valid point. **3 marks**
- (c) HEP generate electricity which allows factories to open up (1) producing goods for sale to create income (1), the HEP and the factories will create jobs (1), the road developments open up the interior (1) making it more accessible for mining, logging, ranching (1). Logging and mining all produce valuable export income (1), and cattle ranching produces beef for country (1) and for export (1). New settlements help to re-house people (1) from more overcrowded areas along the coast (1). Plantation crops helps to create jobs (1) and export income (1).  
Or any valid point. **4 marks**

## River Basin Management

### Question 4

- (a) As the north has a higher rainfall, there is adequate water to fill the reservoirs (1). As the summer temperature is lower, so is the rate of evaporation (1). Due to the increase in tourism in the north, there is a higher demand (1).  
Marks can be awarded for explaining the lack of dams in the south. Rainfall is too low to adequately fill the reservoirs (1). Temperatures are 10°C higher than in the north, so evaporation rates will be higher (1). **4 marks**
- (b) **3 x 1**  
Large reservoir created which can be used for drinking water (1) or for use in industry (1). Farmland can be irrigated (1) so yields are increased (1).  
HEP can be generated (1) for domestic and industrial use (1). **3 marks**
- (c) Loss of habitat for plants and animals (1) some of which may become extinct (1). Build up of silt in dam (1) so less silt is deposited on farmland (1). Loss of historical sites (1) loss of attractive scenery (1). Or any other valid point. **3 marks**

## European Environmental Inequalities

### Question 5

- (a) Consider explanatory answer for (i) for answers to (ii). Put ‘e’ (explanation) or ‘d’ (description) beside each point.
- (i) There are many coastal areas under pressure around the Mediterranean Sea (1) such as Spain, Southern France, Italy and Greece (1). The area from the English Channel up to Denmark is also under pressure (1). The west side of the Black Sea suffers from environmental problems (1). The Atlantic coasts of Portugal, Ireland, SW England and Norway are under less environmental pressure (1). **3 marks**
- (ii) Areas around the Mediterranean have large numbers of tourists (1) who create litter and sewage problems (1). As most large industrial areas are situated on rivers (1), pollution caused by these rivers tends to be carried down to the river mouths (1). Pollution is high around the North Sea due to a high population density in the surrounding countries (1), large concentrations of coastal industry and power stations (1), and heavy use by sea traffic (1). This is a large number of cities located in coastal areas which increases sewage (1). **4 marks**
- (b) eg River Rhine – ICPR (International Commission for the Protection of the Rhine) (1) set up by countries bordering the river – the Netherlands, Germany, France and Switzerland (1) – to monitor water quality and fish stocks (1). Improved sewage treatment was introduced (1), companies in each country were forced to build waste purification plants (1), limits were set on dumping dangerous chemicals such as mercury (1), and fines were issued to companies which continued to pollute the river (1). Environmental pressure groups such as Greenpeace and Friends of the Earth (1) have protested against the dumping of toxic waste (1) to bring it to the public’s attention (1). **3 marks**

## Development and Health

### Question 6

- (a) (i) Accept any social indicator eg infant mortality rate, life expectancy, literacy etc. **1 mark**
- (ii) A lot of money – USA, Japan, Western Europe (1).  
Little money – Africa, Middle East, India, Central America (1). **2 marks**
- (iii) Manufactured goods are sold for higher prices (1). People working in these industries have higher wages (1) and greater spending power (1). This wealth is used to develop education (1) and health provision (1) etc. **3 marks**
- (b) **Detail should be provided, if only a list mark out of 2.**
- Heart Disease**  
Public health education campaign (1), advice on exercise, diet, stopping smoking (1), heart bypass operations (1). More medical check ups (1), better equipment is being invented and used (1).
- AIDS**  
Use of drugs to try and delay the onset of AIDS (1), education campaigns advising the risks of unprotected sex (1), distribution of condoms (1), encourage young people to abstain from sex until marriage (1).
- Malaria**  
Use of insecticide sprays to kill the mosquito (1), anti-malarial drugs to combat the parasite (1), draining of swamps and keeping water barrels covered up so that the breeding sites are destroyed (1), use of mosquito nets (1).
- Or any other valid point. **4 marks**

## Environmental Hazards

### Question 7

- (a) Earthquakes occur due to plates sliding past or towards each other (1), this is not a smooth movement and the plates stick together (1), however pressure continues to build up from the motion of the convection currents underneath (1) and eventually the rocks snap apart releasing vibrations known as shock waves into the surrounding land/coastal area (1).  
Or any valid point. **3 marks**
- (b) Hurricanes tend to develop over warm tropical oceans (1), where sea temperatures exceed 27°C (1), and where there is considerable depth of water (1). They originate when a strong vertical movement of air draws with it water vapour from the ocean below (1). The air rises, in a spiral movement (1), it cools and condenses (1) releasing huge amounts of heat energy (1). This heat energy must be maintained if the storm is to move westwards (1). In time the colder air sinks downwards through the centre of the hurricane (1) to form a central eye (1). Once the hurricane reaches land its source of moisture and heat energy is removed (1) and it rapidly decreases in strength (1). Its average lifespan is 7 to 14 days (1). Tropical Storms start off as depressions (1) and can grow into hurricanes if the conditions are right (1).  
Or any valid point. **3 marks**
- (c) **Mark out of 3 if no case study mentioned. 3:1, 2:2, 1:3**
- Tropical storms uproot trees (1) disrupt telephone and electricity power lines (1). Severe economic problems can result if plantation crops are wiped out eg Nicaragua and Dominican Republic (1). Tidal surges flood low lying coastal areas (1). Where these are densely populated areas there may be major loss of life (1). Flooding can block coastal escape and relief roads (1). Flooding can swell rivers and flash floods can cause thousands of deaths. Flooding may pollute water supplies increasing the risk of cholera (1). Landslides may occur where heavy rainfall washes away buildings erected on steep unstable slopes (1).  
Or any valid point. **4 marks**

[END OF MARKING INSTRUCTIONS]