

2003 Geography

Intermediate 1

Finalised Marking Instructions

Geography

Intermediate 1

Physical Landscapes and Land Use

Q1 a 4 marks

Freeze-Thaw: Rainwater enters cracks in rocks (1). When it freezes it expands (1). This widens the crack (1). Over time pieces of rock break off (1) to form scree (1).
Chemical: Rainwater is mildly acidic (1). It reacts with calcium carbonate in limestone (1), penetrating and dissolving the rock (1) widening joints (1) forming surface features such as clints/grykes potholes.

b 4 correct -3 marks
2 or 3 correct -2 marks
1 correct -1 mark
A Limestone Pavement
B Gorge
C Swallow hole
D Cavern

c (i) 3 marks

Arete	5922	accept 6023 for arete
U-shaped valley	5625	
Pyramidal peak	6023	one mark for correct answer

(ii) 4 marks

eg Farming and tourism - conflict with walkers on farmland causing litter (1), eg 6222 (1) damaging walls (1), leaving gates open (1), frightening livestock (1) or any other valid point.

eg Forestry and farming - uses up existing farmland (1), increases acidity of soils (1), reduces access to hills (1).

eg Industry and tourism – unattractive buildings in the industrial estate (1) at 638239 (1), possible noise and air pollution (1), visual effect of electricity pylons in the area (1).

For full marks reference must be made to the OS map eg block forestry covering lower slopes, electricity pylons on hillsides, footpaths crossing farmland, visual impact of caravan sites etc.

Maximum of 3 if no reference to the O.S. map.

Maximum 1 mark for grid reference.

d 2 marks

One mark for completing pie chart accurately, one mark for correct labels

Lines correct

+

Names correct – show 2 marks at side of diagram

e

4 marks

For full marks, appropriate named examples must be given – National Park Authorities, the National Trust, Yorkshire Dales Society, RSPB, SNH.

Creation of conservation areas by NPA (1), refusing planning permission for developments which may cause conflict (1), reducing traffic congestion with one-way systems (1) public education on conservation issues (1), use of park rangers to control problems (1).

The National Trust can purchase land (1) to protect wildlife habitats (1) etc.

Mark out of 3 if no named example.

Maximum of 2 for a list.

Landscapes and Tourism

- Q2**
- a** 2 x 1
A = Cairngorms B = Snowdonia
Accept Grampian/Cumbrian Mountains
- b** 4 marks
Snow collects in a hollow (1) and compacts to form ice (1). The ice moves/rotates under its own weight (1) plucking rocks out of the back wall (1) and causing abrasion at the bottom of the hollow (1). The hollow over time becomes larger and deeper, creating a corrie (1).
Full marks can be awarded for a well annotated diagram.
Credit should be given for appropriate diagrams and labels.
- c (i)** 4 correct -3 marks
2 or 3 correct -2 marks
1 correct -1 mark
A = stack B = beach C = headland D = cliff
- (ii)** 3 marks. Maximum 2 if no grid references given.
Sandy beaches/attractive coastal scenery (1), historical interest eg castle in 0697 (1) and museums in Tenby (1). It is a National Park (1). Lots of camping/caravan sites (1). Other tourist facilities include the wildlife park (1), sports park (1), buggy trails (1) or any other relevant feature.
Accept a list and award up to one mark for reference number.
Maximum of 3 for 6 figure references.
- (iii)** 4 marks
The large number of camping/caravan sites will create a lot of traffic on the roads (1) which will increase noise and pollution (1) and cause traffic congestion at peak periods (1). The large number of visitors during holiday periods may cause overcrowding on the beaches (1), produce litter problems (1) and cause erosion on the coastal footpaths (1).
- d** 4 marks
Reference could be made to groynes (1) built at right angles to the beach (1) which prevent longshore drift (1). Recurved concrete sea walls (1) reflect wave energy (1). Large boulders (armour blocks) (1) or gabions (steel mesh and stones) (1) absorb energy (1) preventing further erosion (1).

People and the Environment: Europe

Environmental issues

- Q3**
- a (i)** 2 marks
A = Baltic Sea, B = Black Sea
- (ii)** 4 marks
No marks for choice.
Surrounding area can be land or sea.
For example area A – Tourist Resort.
Large numbers of tourists along coastal areas can lead to pollution.(1)
A large amount of sewage is dumped into the sea (1) and sometimes this sewage may still be raw (1). This raw sewage can spread disease (1) as people are swimming in the same area (1) or eating fish that have been contaminated (1). Raw sewage removes the oxygen from the water (1) which harms fish (1) and the amount of marine life may be reduced (1).
- b (i)** 3 marks
1 mark for each correct.
Any one street name for each
Heavy flow: Alexandras, Sofias, Messogion (1).
Medium flow: Patission, Kifissias (1).
Light flow: Archarnon, Pireos, Heleanas (1)
- (ii)** 4 marks
Traffic congestion affects the environment of European cities in many ways eg vehicles release fumes (1) which leads to smog and air pollution (1), coupled with high summer temperatures (1) the levels of smog are increased especially during rush hour (1). The vibrations created by vehicles especially larger vehicles such as lorries leads/causes damage to buildings (2). The large volume of traffic is also very noisy (1) particularly during the peak hours/rush hours.(1)
- (iii)** 3 marks
Completion of scale = 1 mark
Completion of bars accurately = 2 marks
Labels/key = 1 mark
- c** 4 marks
The European Union has banned the dumping of some metals (1) eg mercury, copper, nickel (1) and have very strict controls over other types of metals (1).
The EU has brought in strict laws to reduce industrial pollution eg forcing industries to treat their waste before dumping it in the river (1). This has been brought in along the River Rhine where the countries formed the International Commission for the Protection of the Rhine. (1).
Environmental pressure groups have tried more direct action (1) – eg getting on board ships which are carrying industrial waste (1) and preventing the waste from being dumped (1).

Population

Q4 a (i)

3 marks

Mark 3 x 1 mark, 2 marks for a developed point.

(Accept rich world/poor world)

Up to 2 marks for Europe only or world only statements.

The natural increase for Europe is lower than the rest of the world for several reasons: most European countries have a low Birth Rate and a low Death Rate (1). Comparative statement, whilst the figure for the world is a high BR and low DR (1). When the death rate is taken away from the birth rate it gives the natural increase (1). Europe natural increase is low because the gap between BR and DR is low (1). World natural increase is high because the gap between BR and DR is big. The figures for the world include those for countries which are very poor (1).

No need to refer to birth rate and death rate figures.

(ii)

4 marks

Mark 4 x 1 mark, 2 marks for a developed point.

If a country has a decreasing population it will mean that the number of people of working age will decrease (1). A reduction in the work force can lower the amount of money a country generates (1) because of lowered production and exports (1). A smaller number of people creates under employment (1) and a reduction in the amount of tax generated (1). If there is less tax because fewer people are working then there is less cash available for the government to spend on health care (1) etc. (1 mark only for examples of what tax is spent on). More money will have to be spent on pensions (1) and care provision for the elderly (1).

b

3 marks

Mark 3 x 1 mark, 2 marks for a developed point.

Most of the cities in Europe are found in the Western half of Europe (1) there are far fewer found in Eastern Europe.

There is a concentration of cities in the core region (1) in countries such as France, Germany, Belgium and the Netherlands (1) – one mark for countries named (regardless of the number of countries named).

Can also make reference to richer European countries having more cities than the poorer countries (1). Any references to more sparsely populated areas being near the mountains (1) and a large number of cities found along the major rivers of Europe (1). A large proportion of cities are found on low lying land (1). A large number of cities is found in coastal regions (1) but are fewer cities in Southern Europe (1).

c (i) 3 marks

The urban area has expanded out into the countryside because people are continuing to move out of inner city areas (1) because of crowded living conditions (1), traffic congestion (1), air pollution, noise pollution (1), lack of open space (1), high crime rates (1) and the run down appearance of many parts of the inner city (1). Lack of space and high costs for the land in the city (1) have also forced offices and businesses to move out of the city (1). The edge of the urban area has become more attractive to people and business because of new roads (1), airports (1), recreational facilities and services (1).

(ii) 4 marks

This urban sprawl has created problems for the people and environment in the countryside because it takes up much of the valuable farmland (1) and this in turn leads to wildlife habitats being destroyed (1). Roads leading into the city from the countryside carry an increased amount of vehicles (1) which increases air and noise pollution (1). Areas which had previously been used for recreation have been destroyed to make way for building (1). As more people move into the rural area house prices increase (1), this makes it more difficult for the local people to afford to move (1). As urban sprawl increases the distance from the city to the countryside increases (1), making it even further for those still living in the city to travel to reach a rural area (1).

(iii) 3 marks

Eg: a good location – the theme park is just outside the urban area and so the land will be cheaper (1) and there will be more space (1) for building and also future expansion (1). It is close enough to the urban population for them to travel to the park for a short trip (1), the park is also well served by motorways (1) to make travel quick and easy. The 4 major cities are within 50 km radius from the park (1). Reference can be made to airports for those visitors coming from outside the Netherlands (1).

OR: not a good location – this location would create problems in the rural area – eg traffic congestion (1) particularly at weekends and holidays (1) and there would be air pollution from exhaust fumes (1) which would affect farmer's land and the wildlife of the countryside (1).

Global issues: Development & Health

- Q5 a (i)** 2 marks.
1 mark for each.
Most are subsistence farmers (1), birth rate is very high (1), many children die at an early age (1).
- (ii)** 2 marks.
For example,
Subsistence farmers – people grow only enough to eat (1) so don't have any left to sell (1) which means they have no money to buy food (1). The country has no excess food supplies (1) so cannot export surpluses (1) and use profits to help development (1).
High birth rate – families have to devote energies to looking after large no. of children (1) and government needs to invest in child care (1) which diverts funds from industrial development (1), or any other valid point.
- b (i)** 3 marks.
The countries of the North all have over 80% with access to safe water (1) but in the South the situation is more mixed (1). Most of the countries with less than 80% lie between the Tropics (1). In Africa the countries in the north tend to be worse off than in the south (1), eg South Africa has over 80% but Egypt has less than 80% (1). In SE Asia all countries have less than 80% (1).
- (ii)** 4 marks.
Mark 3+1, 2+2 or 1+3.
For example,
War – people may not be able to get to wells (1) because of minefields (1). Water pipes may have been damaged in conflict (1) and this cuts off water supply (1). The alternative may then be to use dirty water in ponds (1).
Technology – Intermediate technology (1) could lead to construction of new wells (1). Broken down pumps may not be repairable (1) because of lack of training of the population (1).
% of population in industry – a high % means that country will be developed (1) and will have the money to invest in equipment to provide safe water (1). They will be able to manufacture pipes (1) to carry water from rivers to peoples' homes (1).
- c** 3 marks.
No marks for choice.
Accept straight list.
Cancer - smoking cigarettes causes lung cancer (1), stress and eating/drinking habits (1), exposure to radioactive materials (1), pollution and chemicals at work (1), sunbathing without skin protection (1).
Asthma – air pollution (1), smoking while pregnant (1), house dust (1), nitrogen dioxide from gas cookers and central heating (1).
Heart disease – smoking cigarettes (1), drinking too much alcohol (1), fatty diet leading to a build up of cholesterol (1), lack of exercise (1), being overweight (1), too much stress (1).
- d (i)** 2 marks.
3 correct – 2 marks, 1 or 2 correct – 1 mark.
Provide food aid - kwashiorkor
Drain swamps - malaria
Improve sanitation - cholera/malaria

(ii) 4 marks.

1 mark for a **country**. 3 marks for explanation.

Kwashiorkor – Food aid will immediately improve the diet (1) and this will have an effect on general health (1). People will then be fit enough to grow more food (1).

Malaria – as the disease is spread by mosquitoes which breed in swamps (1) their numbers will be affected (1). The mosquitoes will be less likely to infect large numbers of people (1).

Cholera – Cholera is spread by contact with dirty water (1) so improved sanitation will make the water supply safer (1) There will be less need to use dirty water (1).

Global issues: Environmental hazards

- Q6**
- a (i)** 2 marks.
eg next to areas of hot desert (1) within 40 degrees of the equator (1) on the tropics (1), much in Africa and Australia (1).
- (ii)** 3 marks.
eg a time of low rainfall (1) which continues for a long time (1) and very little grows (1), when rainfall is persistently below average (1).
- b (i)** 3 marks.
1 mark for each valid point
Sea temperatures of 27 degrees C or more (1) cause moisture to evaporate (1) creating low pressure (1) and cumulonimbus clouds (1). As pressure drops the storm spins violently (1) and is carried by trade winds (1). As it passes over the warm ocean it absorbs more moisture and intensifies (1).
- (ii)** 3 marks.
eg Drought: appeals for people to donate money/food/clothes may be launched (1) on TV or through advertising (1). Food, clothing etc would be distributed to people in need (1) or technical help may be given to get access to other water supplies (1) eg drill new wells (1).
Flood: helicopters might be brought in to rescue stranded people (1) or drop food/blankets to them (1). Sterilisation equipment might be provided (1) to reduce risk of drinking infected water (1)
- c** 2 marks.
No marks for level of intensity chosen.
Accept intensity 7, 9 or 11.
Intensity 7 - many buildings damaged (1) and poor design of buildings is blamed (1)
Intensity 9 - Over 31000 buildings have been damaged (1) and people had been killed/injured (1). Cost of damage at \$73.5 million (1) is enormous (1).
Intensity 11 - If 31000 buildings have been damaged or destroyed the earthquake must have been very severe (1). People will have been killed and injured in all the buildings as they collapsed (1).
- d (i)** 3 marks.
eg earthquakes - when neighbouring plates move in different directions from each other (1) pressure can build up (1). The sudden release of this pressure (1) sends out shock waves (1) and this causes the crust to move (1), or any other relevant point which describes the causes.
eg volcanoes - plates which are moving apart (1) allow molten magma to rise up between them (1). This builds up pressure beneath the surface (1) and when this reaches a critical level it can cause an explosion (1) and the magma erupts from the vent (1), or any other relevant point which describes the causes.
- (ii)** 4 marks
eg Turkey earthquake. Many buildings collapsed in the towns (1) due to their poor construction (1). A lot of people were trapped in these buildings (1) and few were pulled alive from the wreckage (1). The same happened in the countryside where village houses were built of loose stone (1). This earthquake was in Turkey's main industrial area (1) and output was seriously disrupted (1). The economy has not yet recovered (1).

[END OF MARKING INSTRUCTIONS]