



National
Qualifications
2022

2022 Geography

National 5

Finalised Marking Instructions

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General marking principles for National 5 Geography

Always apply these general principles. Use them in conjunction with the detailed marking instructions, which identify the key features required in candidates' responses.

- (a) Always use positive marking. This means candidates accumulate marks for the demonstration of relevant skills, knowledge and understanding; marks are not deducted for errors or omissions.
- (b) If a candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your team leader.
- (c) For credit to be given, points must relate to the question asked.
- (d) There are six types of question used in this question paper, namely:
 - A Describe . . .
 - B Explain . . .
 - C Give reasons . . .
 - D Match . . .
 - E Give map evidence . . .
 - F Give advantages and/or disadvantages . . .

For each of these question types, the following provides an overview of marking principles and an example of their application.

A Questions that ask candidates to *Describe* . . . (4-6 marks)

Candidates must make a number of relevant, factual points. These should be key points. The points do not need to be in any particular order. Candidates may provide a number of straightforward points or a smaller number of developed points, or a combination of these.

Up to the total mark allocation for this question:

- award **1 mark** for each accurate relevant point
- award **further marks** for development and exemplification.

For example

Question: Describe, in detail, the effects of two of the factors shown. (Modern factors affecting farming.)

Response: New technology has led to increased crop yields, (**1 mark**) leading to better profits for some farmers. (**second mark for development**)

B Questions that ask candidates to *Explain* . . . (4-6 marks)

Candidates must make a number of points that make the process/situation plain or clear, for example by showing connections between factors or causal relationships between events or processes. These should be key reasons and may include theoretical ideas. There is no need for any prioritising of these reasons. Candidates may provide a number of straightforward reasons or a smaller number of developed reasons, or a combination of these. The command word 'explain' is generally used when candidates are required to demonstrate knowledge and understanding.

Award up to full marks for sufficiently accurate and detailed, fully labelled diagrams.

Up to the total mark allocation for this question:

- award **1 mark** for each accurate relevant point
- award **further marks** for developed explanations.

For example

Question: Explain the formation of a U-shaped valley.

Response: A glacier moves down a main valley which it erodes (**1 mark**) by plucking, where the ice freezes on to fragments of rock and pulls them away. (**second mark for development**)

C Questions that ask candidates to *Give reasons* . . . (4-6 marks)

Candidates must make a number of points that make the process/situation plain or clear, for example by showing connections between factors or causal relationships between events or processes. These should be key reasons and may include theoretical ideas. There is no need for any prioritising of these reasons. Candidates may provide a number of straightforward reasons or a smaller number of developed reasons, or a combination of these. The command words 'give reasons' are generally used when candidates are required to use information from sources.

Up to the total mark allocation for this question:

- award **1 mark** for each accurate relevant point
- award **further marks** for developed reasons.

For example

Question: Give reasons for the differences in the weather conditions between Belfast and Stockholm.

Response: In Stockholm it is dry but in Belfast it is wet, because Stockholm is in a ridge of high pressure whereas Belfast is in a depression. (**1 mark**) Belfast is close to the warm front and therefore experiencing rain. (**Second mark for development**)

D Questions that ask candidates to *Match* . . . (3-4 marks)

Candidates must match two sets of variables by using their map interpretation skills.

Up to the total mark allocation for this question:

- award **1 mark** for each correct answer.

For example

Question: Match the letters A to C with the correct features.

Response: A = forestry. (**1 mark**)

E Questions that ask candidates to *Give map evidence* . . . (3-4 marks)

Candidates must look for evidence on the map and make clear statements to support their answer.

Up to the total mark allocation for this question:

- award **1 mark** for each correct statement.

For example

Question: Give map evidence to show that part of Coventry's CBD is located in grid square 3379.

Response: Many roads meet in this square. **(1 mark)**

F Questions that ask candidates to *Give advantages and/or disadvantages* . . . (4-6 marks)

Candidates must select relevant advantages or disadvantages of a proposed development and show understanding of their significance to the proposal. Answers may give briefly explained points or a smaller number of developed points. Award marks for accurate map evidence.

Up to the total mark allocation for this question:

- award **1 mark** for each accurate relevant point
- award **further marks** for developed points.

For example

Question: Give either advantages or disadvantages of this location for a shopping centre. You must use map evidence to support your answer.

Response: There are roads and motorways close by allowing the easy delivery of goods **(1 mark)** and access for customers, **(second mark for development)** for example the A46, M6 and M69.


Marking instructions for each question

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
1.	(a)		<p>Each answer should be identified with a correct grid reference or named example from the map.</p> <p>Award 1 mark for each valid point.</p> <p>The same feature cannot be awarded multiple marks.</p>	4	<ul style="list-style-type: none"> • there are several corries on the map like (0043) Coire na Ciche (1 mark) • there is an arête at 956408 (1 mark) • there is a U-Shaped Valley at 934404 (1 mark) • there is a Pyramidal Peak at (Goat Fell) 992416 (1 mark) or North Goatfell 990423 • the crags in Glen Sannox at 992452 shows a truncated spur (1 mark) • there is a hanging valley in 9645 (1 mark) • there is a misfit stream at 933397. (1 mark) <p>Or any other valid point</p>
	(b)		<p>Award 1 mark for each valid point.</p> <p>Award a maximum of 1 mark for list of processes.</p> <p>Maximum of 2 marks for reference to processes of coastal erosion.</p> <p>A series of diagrams with fully explanatory labels may gain full marks.</p>	4	<ul style="list-style-type: none"> • headlands and bays are found in areas where there are bands of alternating hard and soft rock (1 mark) which meet the coast at right angles (1 mark) for example sandstone a hard rock and clay a soft rock (1 mark) • headlands and bays are formed by differential erosion (1 mark) • the softer less resistant rock erodes backwards more quickly forming bays (1 mark) • when formed the bays then become sheltered by the headlands and erosion slows down (1 mark) • the harder rock erodes more slowly forming headlands (1 mark) which are left sticking out as rocky outcrops (1 mark) • the headlands are then vulnerable to erosion as the wave's energy is concentrated here. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
2.	(a)		Each answer should be identified with a correct grid reference/map evidence. Award 1 mark for each valid point. The same feature cannot be awarded multiple marks.	4	<ul style="list-style-type: none"> the lorsa water flows in a generally South-Western direction (1 mark) the lorsa Water is narrow and mainly straight between 9545 and 9442 (1 mark) it flows within a steep, V-Shaped valley GR 945434 (1 mark) at GR 946440 the river is joined by a tributary (1 mark) the river continues to flow through marshland (1 mark) there is a meander in GR 935408. (1 mark) The valley is flatter and wider by GR 932397 (1 mark) there are lakes on the floodplain e.g. 928392. (1 mark) Or any other valid point.
2.	(b)		Award 1 mark for each valid point. Well-annotated diagrams can obtain full marks. Award a maximum of 3 marks if both stalagmites and stalactites are not mentioned. No mark for rock pillar.	4	Stalactites: <ul style="list-style-type: none"> as water flows underground it carries dissolved limestone (calcium carbonate) with it (1 mark) water drips from the roofs of caverns very slowly and evaporates (1 mark) As the water evaporates, solid calcium carbonate is deposited on the cavern roof (1 mark) over a very long period of time, they build up to form long, thin deposits which grow downwards and look like icicles hanging from the ceiling of a cavern called stalactites. (1 mark) Stalagmites: <ul style="list-style-type: none"> some drops of water fall to the floor of the cavern where they splash and evaporate (1 mark) the splash spreads the deposit of calcium carbonate and as calcium carbonate builds up on the floor (1mark), short, wide, dumpy features grow upwards from the ground called stalagmites. (1 mark). Or any other valid point.
3.			Award 1 mark for each correct grid reference.	4	A = 928445 B = 974463 C = 932510 D = 985468

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
4.			<p>Award 1 mark for each valid point.</p> <p>Award 1 mark for the first valid grid reference.</p> <p>Award a maximum of 3 marks if only one land use is chosen.</p> <p>Accept valid points for any other valid land uses.</p> <p>Max of 1 mark for a list of advantages.</p>	4	<p>If recreation/tourism chosen:</p> <ul style="list-style-type: none"> this area would be good for recreation and tourism because hills such as Glenshort hill provide opportunities for hillwalking and climbing (1 mark) there is a museum at GR 007368 (1 mark) Brodict Castle (015378) could attract tourists interested in history (1 mark) there is a viewpoint at GR 931516 giving walkers a good view of the coast (1 mark) some visitors may enjoy a visit to the Distillery at GR 942498 (1 mark) there are standing stones at GR 0135 which attract tourists (1 mark) there are some roads for access such as the A841. (1 mark) <p>Or any other valid point.</p> <p>If forestry chosen:</p> <ul style="list-style-type: none"> there are suitable areas for forestry to the south of the map extract as the land is not too high, mostly under 300 metres (1 mark) trees can grow on steeper slopes which are unsuitable for other land uses, such as arable farming (1 mark) and there is access for vehicles from the A class road. (1 mark) <p>Or any other valid point</p> <p>If water storage and supply chosen:</p> <ul style="list-style-type: none"> this is an excellent area for water supply as there are a number of natural lochs such as Loch Tanna (1 mark) there are many streams and rivers (such as in 9341) indicating plentiful water supply (1 mark) the high amounts of rainfall on Arran's mountains will maintain water supply levels. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
5.	(a)		Award 1 mark for each valid point. Award 2 marks for a developed point.	4	<p>Conflicts may include:</p> <ul style="list-style-type: none"> • tourists drop litter which can be a danger to farm animals (1 mark) • visitors parking in gateways/on narrow roads can disrupt access for famers/foresters (1 mark) • slow moving farm vehicles can cause delays for visitors (1 mark) • tourists can cause footpath erosion by walking across the farmer's land (1 mark) • there may be conflict between visitors enjoying outdoor activities and farmers/landowners due to deliberate restrictions to outdoor access (1 mark) • farmers often use pesticides and fertilisers and this can cause pollution of local rivers/local environment (1 mark) • quarrying creates air and noise pollution for locals (1 mark) and also spoils the appearance of the scenery (1 mark) such as in Ingleton Quarry in the Yorkshire Dales • wind farms may cause conflicts with locals who see them as an eyesore (1 mark) • reservoirs may cause conflicts as farmland must be flooded to create the dams. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
	(b)		Award 1 mark for each valid point. Award 2 marks for a developed point.	3	<ul style="list-style-type: none"> visitors to the countryside can be encouraged to take litter home with them (1 mark) improved public transport has been introduced in the Lake District to reduce the effect of traffic congestion (1 mark) farmers should be encouraged to provide clear signs to indicate rights of way and better access along strategic paths (1 mark) walkers should be encouraged to follow the Countryside Code/Outdoor Access Code to minimise disruption to footpaths (1 mark) limits have been placed on new quarries in the Yorkshire Dales to limit pollution (1 mark) National Park authorities can restrict lorries to certain access routes on roads to reduce traffic congestion (1 mark) quarry owners can plant trees to create a screen around the perimeter of the quarry to reduce visual pollution. (1 mark) <p>Or any other valid point.</p>
6.			Award 1 mark for each correctly completed element of the weather circle.	3	

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
7.			<p>Award 1 mark per valid point.</p> <p>Award 2 marks for a developed statement.</p> <p>Answers must give reasons for differences between Edinburgh and Nice.</p>	4	<p>Answers may include:</p> <ul style="list-style-type: none"> Edinburgh has strong winds but in Nice it is calmer, because in Edinburgh there are tightly packed isobars whereas in Nice there aren't (1 mark) the wind is from the W in Edinburgh because air moves anticlockwise around the low pressure, whereas it is from the SW in Nice because winds blow clockwise around an area of high pressure (1 mark) it is rainy in Edinburgh because there is a warm front approaching but there is no rain in Nice because there are no fronts (1 mark) in Nice there is high pressure which often brings very cold conditions in winter whereas in Edinburgh the temperature is higher because of cloud cover (1 mark) in Nice there is fog which blocks out the sunshine keeping temperatures low, unlike in Edinburgh (1 mark) in Nice there is little cloud cover which is common in high pressure areas whereas at Edinburgh there is 8 oktas of cloud because it is close to a front (1 mark) conditions are much more unsettled in Edinburgh because it is in a depression whereas Nice is in an anticyclone. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
8.			Award 1 mark for each correct answer.	3	A = 4 km B = 7.25 km C = 6.75km
9.			Award 1 mark for each correct answer.	3	CBD – 3587 Old industry – 4089 New housing – 4183
10.			Award 1 mark for each valid point. Award 2 marks for a developed point. Award 0 marks for grid references. Accept a 'list-style' answer.	4	<ul style="list-style-type: none"> the colliery is no longer present (1 mark) the spoil heap has been replaced by a man-made lake (1 mark) the works have been removed (1 mark) the freight line/siding has been replaced by a train line (1 mark) a non-coniferous wood has been planted (1 mark) a National Trail/Sheffield Country Walk is now present (1 mark) a new settlement has been built on the site of the works in 4187 (1 mark) a nature reserve has been established (1 mark) the B6066 road has been diverted. (1 mark) <p>Or any other valid point.</p>
11.			Award 1 mark per valid point. Award 2 marks for a developed point. Answers must be explanatory. No marks for description. No marks for grid references.	4	<ul style="list-style-type: none"> the land is flat, so easier to build on (1 mark) there is some flat land nearby (395905) for expansion or additional car parking if needed (1 mark) Sheffield is nearby, so there is a market/customers for the shopping centre (1 mark) people living in nearby areas, such as Wincobank and Tinsley may provide a workforce (1 mark) the M1 is close by to provide easy transport to the area (1 mark) there is a train station/bus station/tram stop providing public transport to the shopping centre (1 mark) the land is on the outskirts of Sheffield so would be cheaper to buy. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
12.			<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>Award 0 marks for description.</p> <p>Award 0 marks for reference to population growth that is related to birth/death rates.</p>	6	<p>Physical factors:</p> <p>Relief:</p> <ul style="list-style-type: none"> • people prefer to live on flat, low-lying areas because it is easier to build on (1 mark) • coastal areas allow trade to take place easily from ports located by the sea, so many people live nearby for jobs (1 mark) • mountainous areas have low population densities because thin or no soils limit economic opportunities (1 mark) • upland areas are too cold and wet which makes it difficult to grow crops, so few people live there (1 mark) • mountainous areas also have a low population density because they are often isolated which makes them hard to access. (1 mark) <p>Climate:</p> <ul style="list-style-type: none"> • many people prefer to live in temperate climates where there is enough rainfall to provide water (1 mark) • few people tend to live in areas with extreme climates because areas like the Sahara Desert with very high temperatures and low rainfall make farming difficult (1 mark) • few people live in areas such as Arctic Canada as permafrost makes building houses and roads difficult as the ground is frozen for much of the year (1 mark) • rainforests have a low population density because the environment is inhospitable and humid (1 mark) and tropical diseases like Malaria spread easily. (1 mark) <p>Soil:</p> <ul style="list-style-type: none"> • people prefer to live in areas with fertile soils so that crops can be grown to supply food (1 mark) • where there are poor quality soils, for example, on steep slopes in Northern Scotland, few crops can be grown so less people live there (1 mark) • few people live in hot desert areas because soil dries out and turns to dust, making it difficult to grow crops/keep animals. (1 mark)

Question	General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
			<p>Natural Resources:</p> <ul style="list-style-type: none"> • many people tend to live in areas where there are minerals and raw materials to extract and sell (1 mark) • natural landscapes with beautiful scenery attract tourists which generates job opportunities in hotels, shops and restaurants (1 mark), so more people live in those areas (1 mark) • few people tend to live in areas lacking natural resources because there will be little industry and this means less employment opportunities. (1 mark) <p>Human factors:</p> <p>Job opportunities:</p> <ul style="list-style-type: none"> • jobs in different industries in urban areas encourage people to move to find work (1 mark) • cities such as Rio de Janeiro have a high population density as there is a much wider range of employment and training/educational opportunities compared with rural areas. (1 mark) <p>Transport and communications:</p> <ul style="list-style-type: none"> • areas which are more accessible, for example, Central Lowlands of Scotland tend to have higher population densities (1 mark) • places with good transport links attract people and industries which in turn creates employment opportunities, so more people live there. (1 mark) <p>Services:</p> <ul style="list-style-type: none"> • towns and cities are crowded as people move to cities like Berlin, London and New York for a variety of amenities and services, for example, education, health care, jobs and entertainment. (1 mark) <p>Government aid:</p> <ul style="list-style-type: none"> • industries locate where there is Government funding available, as a result, people move into these areas for work. (1 mark) <p>Conflict:</p> <ul style="list-style-type: none"> • population density in areas like Syria/Afghanistan is falling as people flee conflict and persecution. (1 mark) This can then increase population densities in areas such as Iran, Turkey and Lebanon where refugee camps develop. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
13.			<p>Award 1 mark for a valid point.</p> <p>Award 2 marks for a developed point.</p> <p>Award a maximum of 1 mark for a list of improved facilities (for example better housing, better toilets, better water supplies).</p> <p>Answer will depend on area of study chosen.</p> <p>Award a maximum of 3 marks if no specific city/shanty town is referred to.</p>	4	<p>If Rio de Janeiro chosen:</p> <ul style="list-style-type: none"> • housing was low quality so wooden shacks have been upgraded to permanent dwellings with some services (1 mark) for example, clean-piped water has been provided to help reduce the spread of diseases (1 mark) • informal/poor housing prompted self-help schemes, where local people are provided with materials like bricks to upgrade their homes (1 mark) • to help with overcrowding some prefabricated houses were built in Rocinha by the Brazilian Government (1 mark) with basic facilities like toilets and electricity (1 mark) • as many shanty towns are illegal, the residents have been given legal rights to the land where their house is built (1 mark) • to combat the build-up of rubbish on the streets, roads have been built/improved allowing rubbish collections to take place (1 mark) • access was an issue and in some favelas cable car systems have been constructed to improve transport for residents (1 mark) • due to lack of educational opportunities for young people some schools have been built for communities (1 mark) • poor health care and diseases prompted the building of health clinics (1 mark) • due to the low standard of living of residents, some charities have also donated money to help improve Rocinha (1 mark) for example, by providing computers in schools (1 mark) • self-help schemes, where local people are provided with LOANS TO BUY materials like bricks (1 mark) • drug related crime was an issue so security has been improved by having more police patrols. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
14.			<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>For full marks candidates must explain at least TWO changes.</p> <p>Award 0 marks for description.</p> <p>Award a maximum of 5 marks if only 1 change is mentioned.</p> <p>If a candidate discusses both developed and developing countries, mark both and award the marks for the highest scoring.</p> <p>Award a maximum of 5 marks if no named area is mentioned.</p>	6	<p>If New technology chosen:</p> <p>Developing countries:</p> <ul style="list-style-type: none"> increased crop yields provide better profits for some farmers (1 mark) which can then be used to improve overall standard of living (1 mark) chemical fertilisers and insecticides are used to improve production on farms (1 mark) overuse of agricultural chemicals may result in environmental damage (1 mark) ponds and rivers may suffer from eutrophication caused by excess chemical fertilisers (1 mark) affecting drinking water supplies (1 mark) the use of new technology means less physical work for people (1 mark) but fewer jobs are available and as people become unemployed, they move away to find work, leading to rural depopulation (2 marks) the cost of buying and maintaining equipment and machinery is expensive (1 mark) which many people in developing countries cannot afford. (1 mark) <p>Developed countries:</p> <ul style="list-style-type: none"> machinery increases the efficiency on a farm enabling the farmer to plough, sow, spray etc, more quickly, covering larger areas (2 marks) it also speeds up harvesting and results in the product being delivered to markets fresher (1 mark) and at a higher premium (1 mark) modern technology allows for a smaller work force and lower wage bills (1 mark) this can result in less rural employment/depopulation (1 mark) however, there was a loss of animal habitats for example, hedgerows which were removed to increase field size and accommodate large machinery (2 marks) increased noise and air pollution from large machinery (1 mark) new technology can involve the use of satellite technology/computers to control the application of fertilisers to particular areas of fields improving yields (1 mark) and decrease the cost and waste as only the required amounts are delivered to each segment according to the soil quality there (2 marks) using GPS to manage field operations or animal feeding saves time (1 mark) computerised water management/irrigation can increase crop production (1 mark) drones may be used to survey fields of crops which helps farmers to quickly identify problems. (1 mark)

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
					<p>If GM chosen:</p> <p>Applies to both developed and developing countries:</p> <ul style="list-style-type: none"> genetically modified (HYV) seeds can increase crop yields (1 mark) and improve resistance to disease as they contain pesticides (1 mark) more tolerant crop varieties could be grown in areas where they could not be previously grown (1 mark) many people disagree with GM crops arguing that it may have a negative impact on the natural environment (1 mark) there are health concerns around the use of GM seeds and therefore some people believe they should not be used by farmers (1 mark) GM crops reduce the need for pesticides which is less harmful to insects and bees (1 mark) GM technology is controlled by multi-national companies which can lock farmers into unsustainable business partnerships. (1 mark) <p>If Organic farming chosen:</p> <p>Applies to developed countries:</p> <ul style="list-style-type: none"> chemical-free food is grown to meet consumer demands (1 mark) decreased water pollution due to no chemical run-off (1 mark) protecting aquatic wildlife (1 mark) organic produce often sells for a higher price potentially giving farmers a larger income (1 mark) this type of farming is more labour intensive as it takes the farmer more time and effort to grow crops (1 mark) gaining organic farming status takes time which can negatively affect farmers' income at first. (1 mark)

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
					<p>If biofuels chosen:</p> <p>Applies to developing countries:</p> <ul style="list-style-type: none"> • biofuels are a much cheaper alternative to fossil fuels therefore more farmers can afford them to run machinery (1 mark) • trees do not have to be removed to provide fuel so they can protect the soil from erosion (1 mark) • some plants used for biofuels can grow in marginal areas, so land is not lost for growing food (1 mark) • the cultivation of plants creates jobs for people in rural areas (1 mark) • this provides people with money to improve their standard of living (1 mark) and helps to stem rural depopulation in developing countries (1 mark) • flat land is needed to grow plants for biofuels, so some land is lost for growing food (1 mark) This is a problem for famers in developing countries as many grow their own food for survival (1 mark) • some biofuels are more corrosive than diesel or petrol and can't be used in some vehicles (1 mark) • energy used to grow and process biofuels can be harmful to the environment (1 mark) • biofuel digestors deal with animal and human waste making farms cleaner and people healthier (1 mark) biogas created this way can provide heat, power and electricity for homes at a very low cost (1 mark) • use of biogas reduces the need for deforestation to find firewood (1 mark) it also provides a cleaner fuel reducing smoke from open fires and improving living conditions in houses. (1 mark)

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
					<p>If diversification chosen:</p> <p>Applies to developed countries:</p> <ul style="list-style-type: none"> • helps to boost the farmers' income when they use other ventures such as farm shops (1 mark) • farmers become more independent and less reliant on subsidies (1 mark) • visiting a farm means people experience rural landscapes and outdoor activities (1 mark) • wind farm development on farming land also generates extra income (1 mark) • rising tourist numbers in rural areas causes traffic congestion and increased air pollution (1 mark) • dry stone walls are damaged by people climbing over them (1 mark) and footpath erosion damages the natural landscape (1 mark) • increased litter spoils the look of the landscape and can be harmful to wildlife, for example, livestock can choke on plastic bags (2 marks) • tourist facilities for example, campsites detract from the natural look of the countryside (1 mark) • rivers and lochs used for water sports may become polluted. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Detailed marking instructions for this question
15.	(a)		<p>Award 1 mark for each valid point and 1 mark for a trend.</p> <p>Award 1 mark for a list of countries with the same level of risk.</p>	4	<ul style="list-style-type: none"> Bangladesh has a very high level of risk from the effects of climate change (1 mark) countries like Pakistan are at high risk (1 mark) Most of South America has moderate risk (1 mark) countries like Australia and Russia have a low risk (1 mark) countries in the Northern hemisphere have a lower risk than the Southern hemisphere. (1 mark) <p>Or any other valid point.</p>
	(b)		<p>Award 1 mark per valid point.</p> <p>Award 2 marks for a developed point.</p> <p>Award 0 marks for description only.</p>	6	<ul style="list-style-type: none"> human factors include the burning of fossil fuels for transport, industry and power, producing carbon dioxide (1 mark) worldwide deforestation, sometimes involving rainforest burning, which also produces carbon dioxide (1 mark) car exhausts, nitrogen fertilisers and power stations producing nitrous oxide, enhancing the natural greenhouse effect (1 mark) CFCs found in fridges, air conditioning and aerosols, and as a by-product of the production of polystyrene packaging, like pizza and burger boxes leads to an enhanced greenhouse effect (1 mark) methane levels are rising due to increased rice production, landfill sites and from both ends of cattle (1 mark) the main greenhouse gases in the atmosphere are carbon dioxide, methane and nitrous oxide. They are naturally occurring in the atmosphere but are believed to have increased through the burning of more oil, petrol and coal, at the same time as forests have been removed (1 mark) the build-up of greenhouse gases, such as carbon dioxide (CO₂), in the atmosphere, is believed to result in more heat being retained in the atmosphere than would usually be the case naturally. (1 mark)

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
					<ul style="list-style-type: none"> • mass consumerism and consumption results in a throw away culture, massively increasing greenhouse gas emissions from manufacturing and transportation. (1 mark) For example, single use plastics, fast fashion and electronic/mobile devices (1 mark) • many of the above can lead to melting permafrost from Arctic areas which can release large quantities of the greenhouse gas, methane (1 mark) this exacerbates the natural greenhouse effect, increasing global temperatures. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
16.	(a)		<p>Award marks only for clear differences.</p> <p>Award 0 marks for straight description of one climate.</p> <p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p>	4	<ul style="list-style-type: none"> the graph for Arctic Bay shows a tundra climate while the graph for Santarem shows a tropical rainforest (equatorial) climate (1 mark) the tropical rainforest climate is much wetter and much warmer than the tundra climate (1 mark) the wettest month in the rainforest has around 300 millimetres of rain whereas the wettest month in the tundra has about 25 millimetres (1 mark) March and April are the wettest months in the rainforest whereas August is the wettest month in the tundra (1 mark) the highest temperature in the rainforest is about 28 degrees C but in the tundra it is only 8 degrees C (1 mark) the range of temperature in the tundra is 41 degrees C but only 2 degrees C in the rainforest. (1 mark) <p>Or any other valid point.</p>
	(b)		<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>For full marks both uses and misuses must be mentioned. If not, award a maximum of 5 marks.</p>	6	<p>Use:</p> <ul style="list-style-type: none"> the local indigenous tribes like the Kayapo use the trees and products of the forest to provide them with shelter and food supplying all their needs (1 mark) trees in the forest like teak and mahogany are valuable hardwoods and can be sold for profit (1 mark) cutting down the rainforest creates jobs for the people (1 mark) and can increase their standard of living (1 mark) many of the plants found in the forest can be used in medicine (1 mark) for example the rosy periwinkle is used to cure childhood leukaemia (1 mark) clearing the forest for cattle ranching and crop farming provides food for the increasing populations of countries like Brazil (1 mark) the high rainfall in these areas can be used to generate electricity bringing in money for the Brazilian government which can be invested in education and health for their people. (2 marks)

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
					<p>Misuse:</p> <ul style="list-style-type: none"> • excessive deforestation can lead to the loss of habitat of many animal and plant species (1 mark) • continuing destruction of the rainforests could lead to the extinction of over half of the world's species in around 25 years (1 mark) • the removal of vast areas of forest will affect the earth's climate increasing the greenhouse effect as burning the forest puts pollutants into the atmosphere (1 mark) as well as reducing the carbon store (1 mark) • the clearing of the forest for farming and industry leads to a loss of traditional hunting land for the indigenous people and in some areas local tribes have been forced into reservations resulting in the destruction of their traditional way of life (2 marks) • fertile but fragile soils which make farming possible are quickly washed away when the trees are cleared leading to soil erosion. (1 mark) <p>Or any other valid point</p>

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
17.	(a)		<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>Award 1 mark for a list of places.</p> <p>No marks for explanation.</p> <p>Do not award marks for reference to areas (or cities) which are not affected by tropical storms.</p>	4	<ul style="list-style-type: none"> tropical storms are found in areas with warm sea temperatures (1 mark) tropical storms are found in areas between and around the Tropics (1 mark) Category 3 and 4 hurricanes occur in the Pacific Coast of the USA (1 mark) and in the North Pacific Ocean, near Japan (1 mark) Category 5 hurricanes are most common off the coast of Japan. (1 mark) <p>Or any other valid point.</p>
	(b)		<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>Award a maximum of 5 marks if no reference to a specific world area(s).</p>	6	<ul style="list-style-type: none"> in Japan people take part in regular drills to practise what to do in the event of an earthquake (1 mark) all smartphones in Japan have an earthquake/tsunami alert system installed to give people 5-10 seconds to escape to a safer place or duck under the table (1 mark) earthquake resistant buildings reduce the number of people trapped or killed (1 mark) sprinkler systems and gas cut off valves prevent fires spreading reducing the number of people injured and buildings destroyed (1 mark) in the event of an earthquake short term aid in the form of food, medicine and shelter is sent to the area to treat the injured (1 mark) straight after an earthquake strikes in Japan, all television and radio stations switch immediately to official earthquake coverage which informs the public of risks (1 mark) for those trapped, all offices and many private houses in Japan have an earthquake emergency kits, including dry rations, drinking water, basic medical supplies (2 marks) offices and schools also keep hard-hats and gloves for use in the event of a quake to prevent injury. (1 mark) <p>Any other valid point.</p>

Question		General marking instructions for this type of question	Max mark	Specific marking instructions for this question
18.	(a)	<p>Award 1 mark for each valid point.</p> <p>Maximum of 1 mark for a list of countries with the same trade value.</p> <p>Award 1 mark for a general point without figures or a trend.</p>	4	<ul style="list-style-type: none"> worldwide trade of goods and services in 2018 was higher in developed countries than in developing countries (1 mark) trade of goods and services for the USA, China, and Japan is more than \$400 billion (1 mark) most of South America is \$0–124billion (1 mark) except Brazil which is \$125–250 billion (1 mark) worldwide trade of goods and services for Spain, Canada and Russia is \$250–400 billion. (1 mark) <p>Or any other valid point.</p>
	(b)	<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>For full marks both benefits and problems must be mentioned. If not award a maximum of 5 marks.</p>	6	<p>If the EU chosen:</p> <p>Benefits:</p> <ul style="list-style-type: none"> the EU allows free trade within member states which allows all companies to trade on an equal basis (1 mark) the EU creates more trade within its member countries (1 mark) consumers have lower prices, more choice and opportunities for work throughout the EU (1 mark) businesses have more consumers and are able to exploit economies of scale (1 mark) the single currency, the Euro, means that it is easy for consumers to compare the price of products so makes markets more competitive (1 mark) poorer areas in a country can receive grants to improve the area (1 mark) free movement of labour allows people to work in any other member country. (1 mark) <p>Problems:</p> <ul style="list-style-type: none"> countries have to follow EU decisions/policies for example Common Agricultural Policy and decisions/policies made may not benefit all countries (1 mark) high unemployment and low wages in new member states can lead to increased immigration (1 mark) increased tension can occur between immigrants and locals, for example, jobs or housing (1 mark) countries have to contribute a set amount of money each year to a central fund. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
19.	(a)		<p>Award 1 mark for each valid point.</p> <p>Award 1 mark for a trend.</p> <p>Maximum 1 mark for a list of countries in the same category.</p>	4	<ul style="list-style-type: none"> • most countries in the world have travel restrictions in place (1 mark) • apart from Papua New Guinea all countries in Oceania have full or partial border closures (1 mark) • Canada, New Zealand, China and Italy have full or partial border closures (1 mark) • India, South Africa, Morocco and Peru have full or partial flight suspensions (1 mark) • USA, Spain, Norway and Sweden have restrictions on specific travellers (1 mark) • the UK, Ethiopia, Iran and Myanmar have other measures in place (1 mark) • the majority of countries in South America have full or partial border closures apart from Paraguay, Peru, Venezuela and Guyana. (1 mark) <p>Or any other valid point.</p>
	(b)		<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>If no area named award a maximum of 5 marks.</p> <p>Accept positive and negative points.</p>	6	<ul style="list-style-type: none"> • in resorts such as Venice, mass tourism can have a positive impact on employment, providing many jobs for locals (1 mark) however, these jobs can be seasonal and poorly paid (1 mark) • tourists bring money into the local economy, spending on food, trips, etc (1 mark) however, many companies are multinational and much of the money goes out of the local area (1 mark) • local traditions and customs may be kept alive because tourists enjoy experiencing traditional activities, for example, the Venice Carnival (1 mark) • the natural environment can be damaged by too many visitors (1 mark), for example footpath erosion or too much litter (1 mark) • new roads may need to be built to cope with visitor numbers which may benefit locals (1 mark) Increased traffic, however, may lead to overcrowding and traffic jams (1 mark) • anti-social behaviour due to over consumption of alcohol can be a problem in resort areas (1 mark) • lack of cultural appreciation can offend locals, particularly around dress codes and religious observance. (1 mark) <p>Or any other valid point.</p>

Question		General marking instructions for this type of question	Max mark	Specific marking instructions for this question
20.	(a)	<p>Award 1 mark for each valid point.</p> <p>For full marks, both lines on the graph must be referred to.</p> <p>Max of 3 for 1 line.</p> <p>Award 1 mark for a general trend.</p>	4	<ul style="list-style-type: none"> the number of new cases and deaths from HIV/AIDS worldwide have both decreased in the last 15 years (1 mark) the number of new cases of HIV/AIDS increased from 2.2 million in 1990 to 3.2 million in 2000 (1 mark) new cases of HIV/AIDS decreased from 2.4 million in 2005 to 1.6 million in 2020 (1 mark) the number of deaths from HIV/AIDS increased from 400,000 in 1990 to 1.95 million in 2005 (1 mark) deaths from HIV/AIDS decreased from 1.95 million cases in 2005 to 0.7 million cases in 2020. (1 mark) <p>Or any other valid point.</p>
	(b)	<p>Award 1 mark for each valid point.</p> <p>Award 2 marks for a developed point.</p> <p>Award 0 marks for simple description of any control methods.</p> <p>Answers must be explanatory.</p> <p>If more than one disease mentioned, mark all and award the marks for the highest scoring answer.</p> <p>Award 0 marks awarded for effectiveness of control measures.</p> <p>Award a maximum 1 mark for reference to named examples, for example, drugs/insecticides.</p>	6	<p>If cholera chosen:</p> <ul style="list-style-type: none"> one of the main ways to reduce or control the spread of cholera is to improve sanitation which stops disease from spreading (1 mark) providing wells and pipes makes drinking water safer (1 mark) health education encourages people to wash hands often with soap and safe water, preventing infection as does building and using latrines (2 marks) due to contaminated water people should cook their food well and eat it hot (1 mark) food stuffs should be kept covered and fruit and vegetables should be peeled to prevent contamination (2 marks) the main ways to treat cholera are either a simple drink made from 1 litre of safe water, 6-8 teaspoons of sugar and 1/2 teaspoon of salt helps to rehydrate sufferers so that they can fight off the disease (2 marks) or use re-hydration tablets, if available (1 mark) in especially severe cases, intravenous administration of fluids may be required to save the patient's life (1 mark) treatment with antibiotics is recommended for severely ill patients to help fight the infection. (1 mark) <p>Or any other valid point.</p>

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
					<p>If kwashiorkor is chosen:</p> <ul style="list-style-type: none"> • an important method of managing kwashiorkor is education about the need for a well-balanced diet, so that children do not develop the disease (1 mark) • this can be achieved by educating communities and encouraging them to grow different food types to increase protein intake (1 mark) which might include crops such as cashews, peanuts, lentils or sunflower (1 mark) • advice about constructing irrigation schemes to help crops grow better in times of drought (1 mark) • education about family planning also helps to reduce the number of children per family, making more food available per child (1 mark) • for children who have kwashiorkor it is important to give vitamin and mineral supplements as salt and mineral levels in their blood stream may be dangerously low (1 mark) • zinc supplements might also be administered to help the skin recover (1 mark) • small amounts of food are reintroduced slowly, such as carbohydrates to give energy (1 mark) and protein rich foods to help the child's body recover. (1 mark) <p>Or any other valid point.</p> <p>If malaria chosen:</p> <ul style="list-style-type: none"> • anti-malarial drugs kill blood parasites (1 mark), for example, Chloroquine (1 mark) • insecticides, such as malathion destroy the female anopheles mosquito (1 mark) • draining all breeding areas eradicates larvae (1 mark) • planting eucalyptus trees to soak up moisture removes breeding grounds (1 mark) • water can also be released from dams to drown immature larvae (1 mark) • mustard seeds can be used to drag larvae below the surface to drown them (1 mark) • small fish can be introduced to eat larvae and provide a cheap protein source (1 mark) • genetic engineering of sterile male mosquitoes reduces mosquitoes (1 mark)

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
					<ul style="list-style-type: none"> • health education teaches people about how to protect themselves from being bitten (1 mark) • preventative bed nets are cheap and effective at stopping mosquitos biting at night (1 mark) • new treatments have also been developed which seem to be more effective such as Artemisinin/ACT because malaria parasite is not yet resistant to them (1 mark) • Mosquirix is a newly approved vaccine to prevent malaria. (1 mark) <p>Or any other valid point.</p> <p>If pneumonia chosen:</p> <ul style="list-style-type: none"> • antibiotics are used to treat any bacterial lung infections (1 mark) • patients are encouraged to drink plenty of fluids in order to avoid dehydration (1 mark) • in severe cases a drip may be required to restore the right level of salts and fluids quickly (1 mark) • paracetamol is used to ease the effects of fever and/or headaches (1 mark) • introducing more community-based health workers helps to control the incidence of pneumonia as children with the disease are more likely to be diagnosed and treated quickly (1 mark) which can often help to save lives (1 mark) • vaccinations are being increasingly used in developing world countries to protect children against common infections such as flu (1 mark) • adequate nutrition helps to increase a child's natural defences against disease so education about this also helps to reduce pneumonia. (1 mark) <p>Or any other valid point.</p>

[END OF MARKING INSTRUCTIONS]