Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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This document consists of **15** printed pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Question	Answer	Marks
1(a)(i)	17	**1**
1(a)(ii)	Ideas such as: Employment/business/commerce/trading/better pay; Service provision or example (hospitals, health care, universities, education, range of shops etc.); Entertainment; Accessibility/central location/harbour/port/airport etc. 2 @ 1 mark	**2**
1(a)(iii)	Ideas such as: More people live on North Island/less on South island; Uneven distribution; Large clusters on some areas (or example); Scattered in many parts; Many people live close to coasts/few in centre etc. 3 @ 1 mark	**3**
1(a)(iv)	Identification of physical factors such as: Relief/high/steep/mountainous land/terrain/gradient/aspect/ topography; Weather/climate/cold/icy/dry/desert/temperature; Soils; Volcanoes. River Explanation of each as appropriate: (Relief/high/steep/mountainous land/terrain/gradient/aspect) e.g. People do not want to live in the mountains as it is hard to build on steep slopes etc. (Weather/climate/cold/icy/dry/desert/temperature): e.g. People do not want to live in deserts as people will not survive where there are no water supplies etc. (Soil): e.g. Many farmers are attracted to areas with fertile soil so they can produce food etc. (Volcanoes): e.g. Many people are attracted to areas with volcanoes so they can work in the tourist industry (River) e.g. people live near rivers to obtain a water supply. 2 marks for identification of each factor and 2 for explanation of how it can influence population distribution. 4 @ 1 mark	**4**

Question	Answer	Marks
1(b)(i)	Ideas such as: Increase/Greater percentage in Africa; Decrease/Lower percentage in Europe; Decrease/Lower percentage in Americas; Decrease/Lower percentage in Asia; Asia is largest percentage in 2000 but Africa largest in 2100. Note: Accept accurate statistics 3 @ 1 mark	**3**
1(b)(ii)	Ideas such as in LEDCs there are: high birth rates; poor access to/cannot afford contraceptives; lack of education about birth control; some religions are against contraception; little education about adverse impacts of large families; dependence on agriculture/children work on farms; children are sent out to work/earn money; children help out in the home/fetch firewood/collect water; children look after elderly people; high IMR; traditional attitudes encourage large families/people keep having children until a son is born; many women don't have careers; early marriage; decreasing death rates; improving health care; setting up care structure for old (or examples) pension schemes being set up etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
1(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe the problems caused by overpopulation. Level 2 (4–6 marks) Uses named example. More developed statements which describe the problems caused by overpopulation. (Note: Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements including some place specific reference. Content Guide: Answers are likely to refer to: • Employment • Food supply • Provision of health care • Provision of housing/shelter • Water supply • Sanitation • Provision of education • Traffic congestion • deforestation etc. Place specific reference is likely to consist of: Named parts of the chosen country, Population data etc.	**7**

Question	Answer	Marks
2(a)(i)	Linear	**1**
2(a)(ii)	Similarities such as they are both: Linear/long and thin; Along a road; Surrounded by farmland etc. Differences such as: X is longer; X is wider; X is larger; X has a temple/school but Y does not; Y is nearer irrigated fields; Y only on one side of road but X is on both sides etc. 2 @ 1 mark	**2**

Question	Answer	Marks
2(a)(iii)	Ideas such as: Z is more nucleated but X is linear (reserve); Z is at a junction of roads but X has grown along one road; X space is limited by rivers/valleys but Z is not; Steep slopes/likelihood of floods prevents expansion to east and west at X but there is space to expand at Z etc. 3 @ 1 mark	**3**
2(a)(iv)	Ideas such as: Low order; Small sphere of influence; Low threshold population; Used regularly/daily; Basic necessities / convenience goods E.g.primary school, general store, small shops etc. MAX 1 4 @ 1 mark	**4**
2(b)(i)	Ideas such as; on high land/hill; inland; top of hill; away from river/higher than river etc.; 3 @ 1 mark	**3**
2(b)(ii)	Ideas such as: Next to river; lowest bridging point of the river; which encourages trade (dev); Road connections/on road; Providing good access/transport links; Water availability; Low/flat land; Likely to be fertile soils; Which encourages food production (dev); Sea breezes/moderating influence of sea; Sheltered by high land; fishing etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
2(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describes and/or explains service provision Level 2 (4–6 marks) Uses named example. More developed statements which describes and/or explains service provision (**Note:** Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements which describes and explains service provision, with some place specific reference. Content Guide: Answers are likely to refer to ideas such as: Order of services, Frequency of use, Sphere of influence, Competing settlements/services, Population size; Access etc. Place specific reference is likely to consist of: Locational details, Specific details of the services, Named businesses etc.	7

Question	Answer	Marks
3(a)(i)	Wave cut platform	1
3(a)(ii)	Ideas such as: There are areas of soft rock/hard rock; Which are eroded more quickly/less quickly/erosion takes place at different speed/differential erosion; There may be faults/lines of weaknesses etc. 2 @ 1 mark	2

Question	Answer	Marks
3(a)(iii)	Hydraulic action: Waves trap/compress air in cracks/cliffs are eroded by the power/weight of waves etc. Corrasion/abrasion: Pebbles/rocks carried by waves are thrown against the cliffs/rocks in the waves act like sandpaper etc. Corrosion: Acids in the water wear away the rocks/rocks are dissolved by the chemicals in the water etc. 3 @ 1 mark	**3**
3(a)(iv)	Problems such as: Loss of farmland/farmers lose jobs ; Collapse/damage to housing; Roads/paths destroyed/access disrupted/parking areas lost; Cliff top businesses (or example) damaged/closed down; Negative impact on tourism; Cost of protection measures; People are unable to get insurance etc. 4 @ 1 mark	**4**
3(b)(i)	Ideas such as: Coral is much more widely distributed; Mangrove is next to/on land, coral is at sea/coral goes further out to sea; Coral is all around island, mangrove is not etc. 3 @ 1 mark	**3**
3(b)(ii)	Ideas such as: • warm water; • water temperatures between 18–27 °C (accept figure within range)(dev); • shallow water; • not more than 60 metres deep (dev); • water free from sediment/clear/not polluted/clean; • plentiful supply of oxygen in water; • plentiful supply of plankton/plentiful supply of nutrients; • calm water/no strong currents/waves; • PH is alkaline/basic/8 or above; • high salinity/salty water 5 @ 1 mark or development	**5**

Question	Answer	Marks
3(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which explain what has been done to reduce the risk of the chosen hazard. Level 2 (4–6 marks) Uses named example. More developed statements which explain what has been done to reduce the risk of the chosen hazard. (Note: Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements including some place specific reference. Content Guide: Answers are likely to refer to: Sea walls Offshore barriers groynes evacuation plans forecasting etc. Place specific reference is likely to consist of: Locational details, named places along the coast specific details of schemes etc.	7

Question	Answer	Marks
4(a)(i)	The condition of the atmosphere at a given time and place	1
4(a)(ii)	Wind/weather vane anemometer 2 @ 1 mark	2
4(a)(iii)	Ideas such as: There are too many trees/vegetation close to the weather station; There are buildings near by; There are areas of concrete/it is not all grassed; It is sheltered/shaded/not in open space etc.; 3 @ 1 mark	3

Question	Answer	Marks
4(a)(iv)	Ideas such as: The instruments are not in direct sunlight/roof protects them from heat/sun; They will not be affected by the wind; It measures air temperature/not ground temperatures/not affected by radiation from ground; They are secure from tampering/protected from people/animals; does not conduct heat; free flow of air/ventilation; reflects/does not absorb sun's rays etc. 4 @ 1 mark	4
4(b)(i)	Ideas such as: Close to/on equator/in Equatorial region; Between 10 degrees N/S/between 10 degrees N and 23S; Middle/Central Africa; Western side ; Coast of West Africa/East coast of Madagascar/island around 20S) Further south than north / stretches to Capricorn not Cancer etc. 3 @ 1 mark	3
4(b)(ii)	Ideas such as: Close to Equator/in Equatorial region; Overhead sun/high angle of sun/sun's rays more concentrated; Convectional rainfall/convection; Large amounts of evaporation; Large amounts of transpiration; Low pressure/ascending air Evapo-transpiration (as alternative to evaporation and transpiration) etc. 5 @ 1 mark or development	5

Question	Answer	Marks
4(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe impacts of deforestation on local natural environment and/or local people. Level 2 (4–6 marks) Uses named example. More developed statements which describe impacts of deforestation on local natural environment and/or local people (Note: Max 5 if no named or inappropriate example) Level 3 (7 marks) Comprehensive and accurate statements which describe impacts of deforestation on local natural environment and local people including some place specific reference. Content Guide: Answers are likely to refer to: Death of wildlife extinction loss of habitat impact on food chains, soil erosion killing of people migration of people to urban areas etc. Place specific reference is likely to consist of: Locational details, named species/tribes etc.	7

Question	Answer	Marks
5(a)(i)	Cross on Fig.6	1
5(a)(ii)	Arable – where crops or e.g. are grown Pasture – where animals or e.g. are grazed/kept 2 @ 1 mark	2

Question	Answer	Marks
5(a)(iii)	Fife has: Greater percentage arable; Greater percentage lowland pasture; Smaller percentage upland pasture; Largest in Fife is arable but largest average is lowland pasture; Smallest in Fife is upland pasture but smallest average is arable Note: Accept accurate statistics. 3 @ 1 mark	**3**
5(a)(iv)	Ideas such as: They are farming as a job/to earn money/to get a profit; They produce large outputs/high yields/more crops; They are able to use chemicals/fertilisers/pesticides; Areas can be mechanised/they can afford equipment; There is a large demand for products; Good communications enable transport to market etc.; 4 @ 1 mark	**4**
5(b)(i)	Ideas such as both farms: are mixed farms; have pasture/grassland/animals (or e.g.); have arable land/grow crops; have large fields/are large; have gently sloping land; are commercial etc. 3 @ 1 mark	**3**
5(b)(ii)	Ideas such as: Fertile soils are required for many crops; Steep slopes are often used for pasture/too steep for Crops/flat land used for crops; lowland areas are often used for crops/upland for grazing; Amount of precipitation will determine which crops will grow; sunshine needed for ripening of crops; number of frost free days/length of growing season influences choice of crops/some areas are too cold to grow crops so animals are kept etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
5(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe the farming system. Level 2 (4–6 marks) Uses named example. More developed statements which describe the farming system. (**Note:** Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements, including some place specific reference. Content Guide: Answers are likely to refer to: Natural inputs e.g. rainfall, soil, temperatures etc. Human/economic inputs e.g. labour, machinery, fertilisers etc. Processes e.g. ploughing, feeding animals, harvesting etc. outputs Place specific reference is likely to consist of: Locational details/named areas within country/area chosen Statistics etc	7

Question	Answer	Marks
6(a)(i)	2009/2010	1
6(a)(ii)	Increases predicted for China are greater/more rapid 150 to 220 (quadrillion Btu) China/100 to 110 (quadrillion Btu) USA 2 @ 1 mark	2
6(a)(iii)	Ideas such as: Increasing ownership of cars/vehicles; Industrialisation; Mechanisation/technological development; More aircraft/flights; Tourism is increasing; More use of electrical appliances in the home (or example) etc. 3 @ 1 mark	3

Question	Answer	Marks
6(a)(iv)	Ideas such as: Use of fossil fuel/burning of coal/oil; Emissions of carbon dioxide/greenhouse gases; Trap heat/form a blanket around the earth/greenhouse effect; Temperatures increase/global warming; Ice sheets/glaciers melted; Rise in sea level etc. 4 @ 1 mark	**4**
6(b)(i)	Country with most polluted air = Pakistan A country where air quality is moderate = China/Myanmar/Sri Lanka/South Korea/Indonesia Country where air pollution is least likely to cause problems = Japan 3 @ 1 mark	**3**
6(b)(ii)	Ideas such as: loss of/damage to natural vegetation; birds/insects/animals killed /poisoned; habitat loss; extinction of species; impact on ecosystems/food chains; acid rain pollutes water; acid rain decreases soil pH etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
6(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe methods used to supply water. Level 2 (4–6 marks) Uses named example. More developed statements which describe methods used to supply water. (**Note:** Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements, including some place specific reference. Content Guide: Methods are likely to include: Reservoirs Wells Pumping water from aquifer Desalination Water transfer schemes Network of pipes River water Water treatment plants Tanks on roofs Import water etc. Place specific reference is likely to consist of: Locational details; Names of places/species within chosen country Specific details of methods	7