National
Qualifications
SPECIMEN ONLY

S833/76/12

Geography
Global Issues and Geographical Skills

Date — Not applicable

Duration — 1 hour 10 minutes

Total marks — 60

SECTION 1 — GLOBAL ISSUES — 40 marks

Attempt **TWO** questions.

SECTION 2 — APPLICATION OF GEOGRAPHICAL SKILLS — 20 marks

Attempt the question.

You will receive credit for appropriately labelled sketch maps and diagrams.

Write your answers clearly in the answer booklet provided. In the answer booklet you must clearly identify the question number you are attempting.

Use **blue** or **black** ink.

Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not, you may lose all the marks for this paper.

S8337611

MARKS

SECTION 1 — GLOBAL ISSUES — 40 marks

Attempt TWO questions.

Question 1: River basin management

(a) When selecting the site for a dam and its associated reservoir:

(i) **describe** the physical factors that need to be considered **and**

(ii) **explain** why they are important. **8**

(b) **Discuss** the adverse socio-economic and environmental consequences of a named river management project that you have studied. **12**

Question 2: Development and health

> Of the 106 countries with ongoing malaria transmission in 2000, 57 achieved reductions in new malaria cases of at least 75% by 2015. Eighteen countries reduced their malaria cases by 50–75%.
>
> World Health Organization — World Malaria Report 2015.

For a water-related disease you have studied:

(a) **describe**, in detail, the strategies used to manage the disease **and**

(b) **comment** on the effectiveness of these strategies. **20**

Question 3: Global climate change

> The impacts of global warming are likely to be 'severe and irreversible', a major report by the UN has warned.
>
> Newspaper article

(a) **Discuss** a range of possible impacts of climate change. You should support your answer with specific examples. **12**

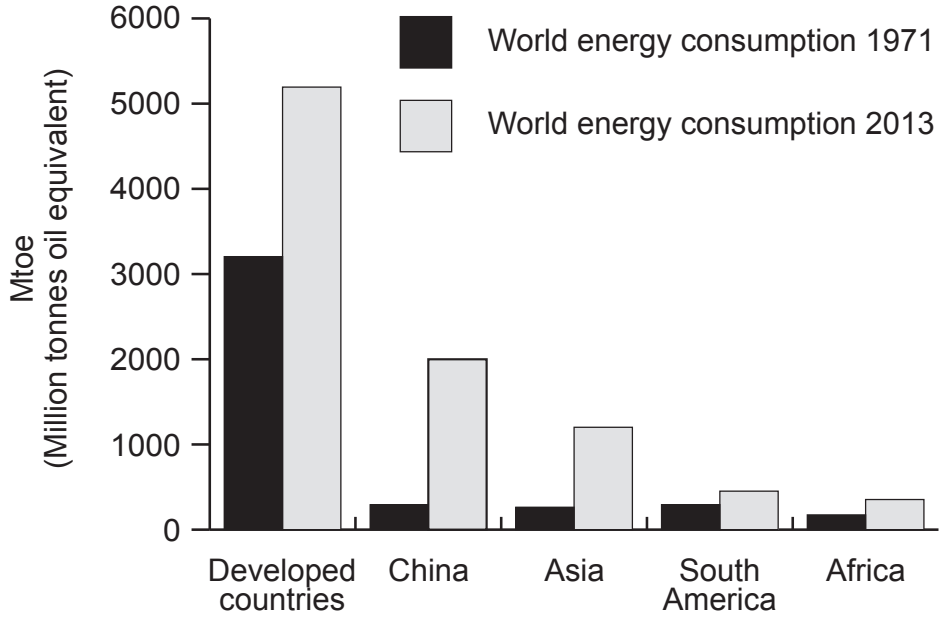
(b) Many strategies have been implemented to both reduce greenhouse gas emissions **and** to manage the effects of climate change.

(i) **Describe** strategies you have studied **and**

(ii) **comment** on their effectiveness. **8**

Question 4: Energy **MARKS**

Diagram Q4A: World energy consumption 1971 and 2013

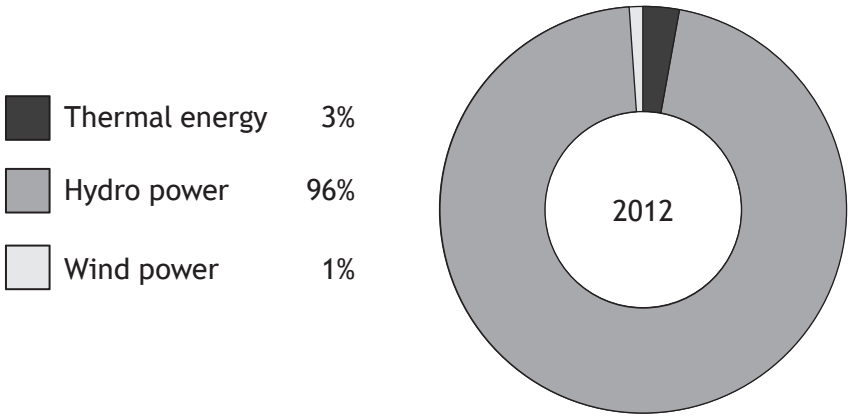


(a) Study Diagram Q4A.

(i) **Describe** the trends shown in the graph **and**

(ii) **suggest reasons** for these changes in energy demand. **10**

Diagram Q4B: Norway — source of electrical generation 2012



(b) Look at Diagram Q4B.

Discuss the effectiveness of hydroelectric power (HEP), or any other renewable source of energy you have studied, in meeting energy demands. You may wish to refer to one or more countries in your answer. **10**

MARKS

SECTION 2 — APPLICATION OF GEOGRAPHICAL SKILLS — 20 marks

Attempt the question.

Question 5

> Planning permission has been granted to create 300 new homes to the south of Highbridge, which is a small town in the district of Sedgemoor. The development will include a new primary school for 210 pupils, outdoor play facilities and public spaces. The site will also provide opportunities for new walkways and a cycle route into Highbridge.

Study the Ordnance Survey map extract of the Highbridge area; Diagram Q5A; Diagram Q5B; Diagram Q5C; and Diagram Q5D before answering this question.

Referring to evidence from the OS map extract and information from the other sources:

(a) **discuss** the suitability of the site, shown on Diagram Q5A, for the proposed housing development **and**

(b) **suggest** any social, economic or environmental impacts this development may have on the local area. **20**

Diagram Q5A: Proposed site for new housing development in Highbridge, Sedgemoor district

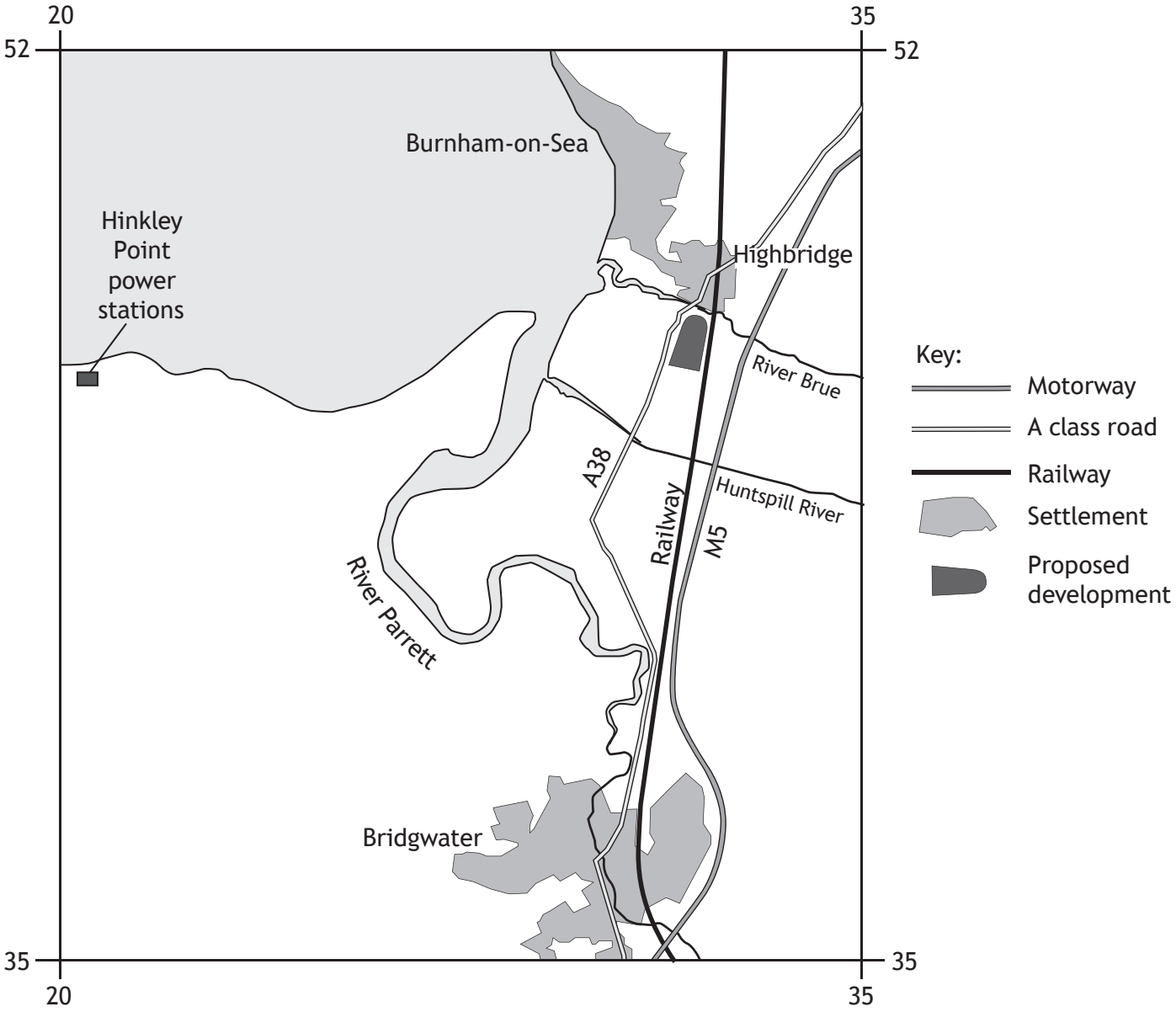


Diagram Q5B: Location of Highbridge

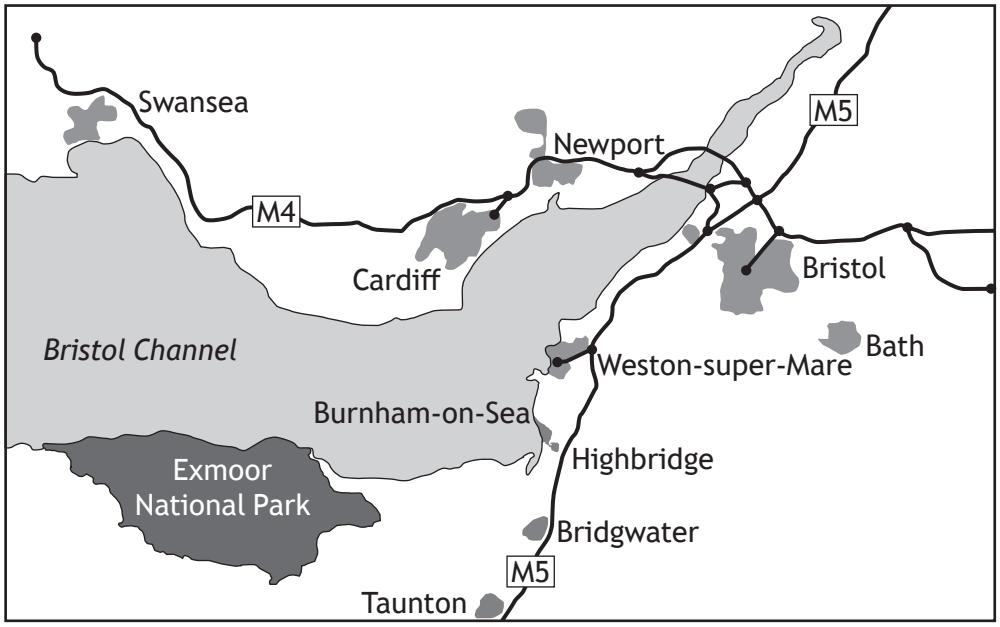


Diagram Q5C: Population of Sedgemoor district

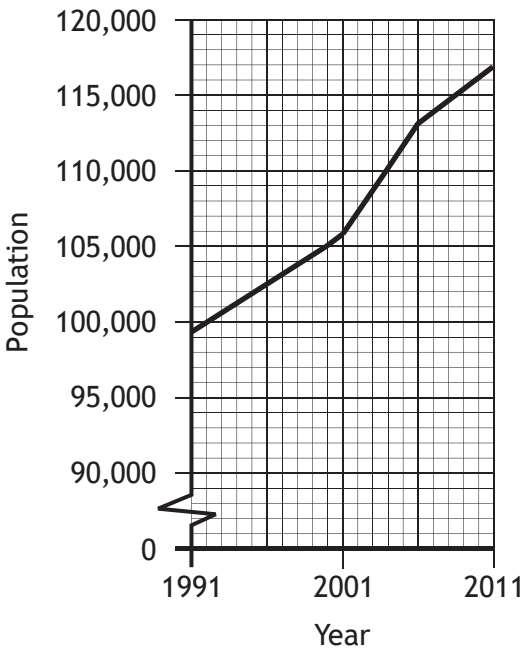


Diagram Q5D: News article from Yeovil Express, October 2015

YEOVIL EXPRESS

Hinkley Point C is good news for local area

The expansion of the nuclear power station will provide 25,000 new jobs to the area during construction. EDF Energy has also been busy putting into place the infrastructure that will help deliver the project and reduce its impact for the local community. £16 million has been invested in improving the local road network in Bridgwater and surrounding areas.

[END OF SPECIMEN QUESTION PAPER]

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S833/76/22

Geography
Global Issues and Geographical Skills
Ordnance Survey Map

Date — Not applicable

Duration — 1 hour 10 minutes

ORDNANCE SURVEY MAP

For Question 5

Note: The colours used in the printing of this map extract are indicated in the four little boxes at the top of the map extract. Each box should contain a colour; if any does not, the map is incomplete and should be returned to the Invigilator.

* S 8 3 3 7 6 2 2 0 1 *

Ordnance Survey

1:50 000 Scale
Landranger Series

Extract No 2249/182

Four colours should appear above; if not then please return to the invigilator.
Four colours should appear above; if not then please return to the invigilator.

ROADS AND PATHS

Not necessarily rights of way

- Junction number; Service area (S); Elevated (1); M1 — Motorway (dual carriageway)
- Unfenced; A 470; Dual carriageway — Primary Route (A network of recommended through routes which complement the motorway system)
- A 493; Footbridge — Main road
- Road under construction
- B 4518 — Secondary road
- A 855; Bridge; B 885 — Narrow road with passing places
- Road generally more than 4m wide
- Road generally less than 4m wide
- Path / Other road, drive or track
- Gradient: steeper than 20% (1 in 5), 14% to 20% (1 in 7 to 1 in 5)
- Gates, Road tunnel
- Ferry P; Ferry V — Ferry (passenger), Ferry (vehicle)

RAILWAYS

- Track multiple or single
- Track under construction
- Siding
- Tunnel, cuttings
- Narrow gauge, tramway or light rail system
- Bridges, footbridge
- LC — Level crossing
- Viaduct, embankment
- Station, (a) principal
- Light rail station

WATER FEATURES

Marsh or salting; Towpath; Lock; Slopes; Cliff; Shingle; Aqueduct; Canal; Ford; Beacon; Flat rock; Lighthouse (in use); Lighthouse (disused); Sand Dunes; Weir; Footbridge; Normal tidal limit; Bridge; Low water mark; Mud; High water mark; Lake; Canal (dry)

HEIGHTS

1 metre = 3·2808 feet

- 50 — Contours are at 10 metres vertical interval
- ·144 — Heights are to the nearest metre above mean sea level

Where two heights are shown, the first is the height of the natural ground in the location of the triangulation pillar, and the second (in brackets) to a separate point which is the natural summit.

ROCK FEATURES

Outcrop; Cliff; Scree

PUBLIC RIGHTS OF WAY

- Footpath
- Bridleway
- Restricted byway (not for use by mechanically propelled vehicles)
- Byway open to all traffic

The symbols show the defined route so far as the scale of mapping will allow.

The representation on this map of any other road, track or path is no evidence of the existence of a right of way. Not shown on maps of Scotland

Danger Area — Firing and Test Ranges in the area. Danger! Observe warning notices.

OTHER PUBLIC ACCESS

- Other route with public access (not normally shown in urban areas). Alignments are based on the best information available. These routes are not shown on maps of Scotland.
- On-road cycle route
- Traffic-free cycle route
- 4 — National Cycle Network number
- 8 — Regional Cycle Network number
- National Trail, Scotland's Great Trails, European Long Distance Path and selected Recreational Routes

BOUNDARIES

- National
- District
- County, Unitary Authority, Metropolitan District or London Borough
- National Park

ANTIQUITIES

- Site of antiquity
- Site of Battle (with date)
- Visible earthwork
- VILLA — Roman
- Castle — Non-Roman

TOURIST INFORMATION

- Camp site / caravan site
- Garden/aboretum
- Golf course or links
- Information centre (all year / seasonal)
- Nature reserve
- P; P&R; P&R — Parking, Park and ride (all year / seasonal)
- Picnic site
- Recreation / leisure / sports centre
- Selected places of tourist interest
- Phone, public / emergency
- Viewpoint
- V — Visitor centre
- Walks / Trails
- World Heritage site or area
- Youth hostel

LAND FEATURES

- Electricity transmission line (pylons shown at standard spacing)
- Pipe line (arrow indicates direction of flow)
- ruin — Buildings
- Important building (selected)
- Bus or coach station
- Current or former place of worship: with tower; with spire, minaret or dome
- Place of worship
- Glass structure
- H — Heliport
- Triangulation pillar
- Mast
- Wind pump
- Wind turbine
- Windmill with or without sails
- Graticule intersection at 5' intervals
- Cutting, embankment
- Landfill site or slag/spoil heap
- Coniferous wood
- Non-coniferous wood
- Mixed wood
- Orchard
- Park or ornamental ground
- Forestry Commission land
- National Trust (always open / limited access, observe local signs)
- Natural Resources Wales
- National Trust for Scotland (always open / limited access, observe local signs)

ABBREVIATIONS

Br	Bridge	MS	Milestone
Cemy	Cemetery	Mus	Museum
CG	Cattle grid	P	Post office
CH	Clubhouse	PC	Public convenience (in rural areas)
Fm	Farm	PH	Public house
Hospl	Hospital	Sch	School
Ho	House	TH	Town Hall, Guildhall or equivalent
MP	Milepost	Univ	University

Scale 1: 50 000
2 centimetres to 1 kilometre (one grid square)

2 1 0 Kilometres 1 2 3

1 0 Miles 1 2

1 kilometre = 0·6214 mile

1 mile = 1·6093 kilometres

Magnetic North; Grid North; True North

Diagrammatic only

National
Qualifications
SPECIMEN ONLY

S833/76/12

Geography
Global Issues and Geographical Skills

Marking Instructions

These marking instructions have been provided to show how SQA would mark this specimen question paper.

SQA ©

General marking principles for Higher 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) Where the candidate does not comply with the rubric of the paper and answers two parts in one section, mark both responses and record the better mark.

(d) Marking must be consistent. Never make a hasty judgement on a response based on length, quality of handwriting or a confused start.

(e) Use the full range of marks available for each question.

(f) The detailed marking instructions are not an exhaustive list. Award marks for other relevant points.

(g) Award marks only where points relate to the question asked. Where candidates give points of knowledge without specifying the context, award marks unless it is clear that they do not refer to the context of the question.

(h) Award marks for knowledge/understanding where points are:
- relevant to the issue in the question
- developed (by providing additional detail, exemplification, reasons or evidence)
- used to respond to the demands of the question (for example evaluate, analyse).

Marking principles for each question type
There is a range of question types in this question paper. For each question type, the following provides an overview of marking principles, and an example.

***Describe* questions**
Candidates gain marks for making 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. Candidates must provide more than an outline or list to gain marks. They could refer to, for example, a landscape feature, a landscape formation process, a situation or facts demonstrating geographical knowledge.

***Explain* questions**
Candidates gain marks for explaining or suggesting reasons for the cause or impact of something, or for referring to causal connections and relationships. Candidates must do more than describe to gain marks here.
- Where the question asks about a landscape feature, candidates should refer to the processes leading to landscape formation.
- For a source-based question, candidates should make use of these and refer to them within their answer for full marks.

Where candidates provide a purely descriptive answer, or one where development is limited, award no more than half the available marks for the question.

Other questions look for candidates to demonstrate higher-order skills and will use command words such as analyse, evaluate, to what extent, and discuss.

***Analyse* questions**
Candidates gain marks for identifying parts, the relationship between them, and their relationships with the whole; and for drawing out and relating implications.

Award an analysis mark where candidates use their knowledge and understanding or a source to identify relevant components (for example of an idea, theory, argument) and clearly show at least one of the following:

- links between different components
- links between component(s) and the whole
- links between component(s) and related concepts
- similarities and contradictions
- consistency and inconsistency
- different views or interpretations
- possible consequences or implications
- the relative importance of components
- understanding of underlying order or structure.

Where candidates are asked to analyse they should identify parts of a topic or issue and refer to the interrelationships between, or impacts of, various factors. For example, where a question asks for an analysis of the soil-forming properties which lead to the formation of a gley soil, candidates should refer to how the various soil formatting properties contributed to its formation.

***Evaluate* questions**
Candidates gain marks for making a judgement of the success, failure, or impact of something based on criteria. They should give a brief description of the strategy or project being evaluated, before offering an evidenced conclusion.

***Account for* questions**
Candidates gain marks for giving reasons which are often (but not exclusively) from a resource, for example: for a change in trade figures; a need for water management; or differences in development between contrasting developing countries.

***Discuss* questions**
Candidates gain marks for exploring ideas about a project, or the impact of a change. They should consider different views on an issue or argument. This might not be a balanced argument, but they should give a range of impacts or ideas within their answer.

***To what extent* questions**
Candidates gain marks for considering the impact of a management strategy or strategies they have explored. They should give a brief description of the strategy or project being evaluated, before offering an evidenced conclusion. They do not need to offer an overall opinion based on a variety of strategies, but should assess each separately.

Marking instructions for each question

Section 1 — Global issues

Question			General marking instructions	Max mark	Specific marking instructions for this question
1.	(a)	(i) and (ii)	Award **1 mark** for each descriptive factor. Award **1 mark** for each explanation. Award **a maximum of 5 marks** for descriptive points. Do not award marks for human factors. Although there could be overlap with factors like cost, this must be clearly linked to the **physical** environment.	**8**	Points may include: • narrow and deep valleys **(1 mark)** can be dammed more efficiently and require less construction materials, reducing the overall cost of the project **(1 mark)** • narrow valleys also have a reduced surface area **(1 mark)** and combined with low temperatures **(1 mark)** they reduce water loss from evaporation **(1 mark)** • if the site has impermeable rock **(1 mark)** this would reduce water loss from the reservoir by percolation **(1 mark)** • a geologically-stable area away from earthquake zones/fault lines **(1 mark)** will reduce the risk of damage or failure of the dam **(1 mark)** • a high drainage density, **(1 mark)** or high rainfall **(1 mark)** will ensure that the reservoir will receive enough water to avoid transfer from adjacent drainage basins. **(1 mark)** Or any other valid point.

Question			General marking instructions	Max mark	Specific marking instructions for this question
	(b)		Award **1 mark** for each consequence and award further marks where the candidate has developed this. Candidates must include both socio-economic and environmental adverse consequences. Award **a maximum of 10 marks** if only one is discussed. Award **2 marks** where candidates give specific named examples within the case study area, which develop the answer. Award **0 marks** where candidates give positive consequences. Award **a maximum of 10 marks** if the answer does not clearly relate to a specific named water management project.	**12**	For example the Three Gorges Dam, China. Socio-economic consequences could include: • the displacement of millions of people from the Yangtze river region **(1 mark)**; hundreds of towns and villages, such as Yunyang, **(1 mark)** were evacuated and later submerged **(1 mark)** • those forced to relocate were promised compensation for the value of their homes and land **(1 mark)** although this did not cover the cost of relocation, and some of the money was lost through corruption **(1 mark)** • compensation in some instances has been as little as the equivalent of £5 a month, **(1 mark)** and many claim they have received only half the land compensation they were promised **(1 mark)** • people have been forced to move to more expensive cities and towns **(1 mark)** • the displaced people are mainly farmers with little formal education. This makes it difficult for them to find jobs in the cities and towns **(1 mark)** • farmers remaining in the region have had to migrate northwards on to steeper mountain slopes. **(1 mark)** This increases soil erosion in this area. **(1 mark)** Environmental consequences: • construction of the dam has led to an increase in landslides in the area **(1 mark)** as a result of erosion caused by the increases and decreases in reservoir water **(1 mark)** • there are 300 species of fish in the Yangtze river. The dam has created a barrier in the river and fish are not able to travel upstream to spawn, so the populations of the species have decreased **(2 marks)** • the Chinese River Dolphin **(1 mark)** is at risk of extinction because the construction area covers a large part of this animal's habitat **(1 mark)** • decreases in freshwater flow have meant that more saltwater is creeping up the Yangtze, **(1 mark)** endangering fish populations already threatened by overfishing. **(1 mark)** Or any other valid point.

Question			General marking instructions	Max mark	Specific marking instructions for this question
2.			Candidates may choose to answer parts (a) and (b) separately or together. Award **a maximum of 15 marks** if candidates do not comment on effectiveness. Award marks once for each evaluation point. For example, candidates can gain marks only once for referring to cost. Do not award marks for reversals. Award up to **3 marks** where candidates give appropriate named examples which develop the answer.	**20**	Measures taken to eradicate the mosquitoes include: • one method used was to spray pesticides/insecticides in an attempt to kill the Anopheles mosquitoes. **(1 mark)** For example, DDT is sprayed on walls in homes **(1 mark)** • breeding genetically-modified sterile mosquitoes. **(1 mark)** These mosquitoes are unable to carry the parasite/mosquitoes give birth to predominantly male offspring **(1 mark)** • specially designed mosquito traps mimic animals and humans by emitting a small amount of carbon dioxide **(1 mark)** in order to lure the mosquitoes into the trap where they are killed **(1 mark)** • BTI bacteria artificially grown in coconuts. **(1 mark)** The fermented coconuts are broken open after a few days and thrown into the mosquito larvae-infested ponds. **(1 mark)** The larvae eat the bacteria and have their stomach lining destroyed **(1 mark)** • putting larvae-eating fish into stagnant ponds or padi fields, **(1 mark)** such as the muddy loach **(1 mark)** • flushing reservoirs every seven days **(1 mark)** as it takes longer than this period of time for the larvae to develop into adult mosquitoes **(1 mark)** • planting eucalyptus trees **(1 mark)** can help soak up excess moisture and reduce the amount of stagnant water **(1 mark)** • covering standing water and water storage cans, **(1 mark)** for example the Oxfam bucket, **(1 mark)** reduces the chances of mosquitoes breeding near to homes or villages. **(1 mark)**

Question			General marking instructions	Max mark	Specific marking instructions for this question
					Measures taken to treat those suffering from malaria include: • medication to kill the parasite/prevent infection **(1 mark)** such as quinine/Chloroquine/Lariam/Malarone/Artemisia **(1 mark)** • trials have produced a vaccine (1) such as RTS,S **(1 mark)** which has now been recommended as being safe for use, as prevention is better than cure **(1 mark)** • education programmes **(1 mark)** such as the WHO's 'Roll Back Malaria' campaign. **(1 mark)** In particular, educating people in the use of insect repellents **(1 mark)** or covering the skin at dawn/dusk **(1 mark)** when mosquitoes are most active, to reduce the chances of being bitten **(1 mark)** • the increased use of insecticide-coated mosquito nets at night. **(1 mark)** Possible comments on the effectiveness might include: • insecticides to kill the mosquito were effective at first, however the mosquito became resistant to DDT **(1 mark)** and alternative insecticides are often too expensive for developing countries **(1 mark)** • mosquito traps have been effective on a small scale **(1 mark)** • the BTI bacteria in coconuts is an environmentally-friendly solution, **(1 mark)** with two to three coconuts clearing a typical pond of mosquito larvae for 45 days **(1 mark)** • draining stagnant ponds is impossible in tropical climates where it can rain heavily most days **(1 mark)** • anti-malarial drugs can have unpleasant side-effects **(1 mark)** so may prevent people from completing the whole course, increasing the likelihood of the disease developing **(1 mark)** • vaccine trials have shown a 56% drop in malaria in children **(1 mark)** however this can give people a false sense of confidence and they stop using bed nets **(1 mark)** • larvae-eating fish adds extra protein to people's diets. **(1 mark)** Or any other valid point.

Question			General marking instructions	Max mark	Specific marking instructions for this question
3.	(a)		Award **1 mark** for an impact of climate change. Award further marks for development of each impact. Award marks for both positive and negative impacts. Award **2 marks** where candidates give specific, appropriate named examples which further develop the answer.	**12**	Possible answers might include: • sea level rises caused by thermal expansion of the oceans **(1 mark)** and also by the melting of glaciers and land-based ice caps **(1 mark)** • low-lying coastal areas will suffer flooding, **(1 mark)** for example, Bangladesh **(1 mark)** leading to large-scale displacement of people **(1 mark)** and loss of land for farming and destruction of property **(1 mark)** • climate change refugees moving to higher ground or to other countries **(1 mark)** from areas such as Tuvalu or the Maldives **(1 mark)** will exert more pressure on resources such as housing, water and power supplies in the receiving area **(1 mark)** • more extreme and more variable weather such as flooding and droughts, **(1 mark)** and more frequent and intense hurricanes due to increased sea temperatures **(1 mark)** • globally, an increase in precipitation, particularly in the winter in northern countries **(1 mark)** • increase in extent of tropical/vector borne diseases, as warmer areas expand. **(1 mark)** Possibly up to 40 million more people in Africa being exposed to risk of contracting malaria **(1 mark)** • longer growing seasons in many areas in northern Europe, **(1 mark)** increasing food production and range of crops being grown **(1 mark)** • predicted extinction of at least 10% of land species, **(1 mark)** and coral reefs suffer 80% bleaching. **(1 mark)** When water is too warm, corals expel the algae living in their tissues causing the coral to turn completely white **(2 marks)** • changes to ocean current circulation may mean the thermohaline circulation starts to lose impact on north-western Europe, resulting in considerably colder winters **(2 marks)** • a more frequent El Niño/La Niña **(1 mark)** leads to changes in the monsoon **(1 mark)** • a prolonged dry season can lead to forest fires, **(1 mark)** for example California **(1 mark)** • the North-West Passage **(1 mark)** will be opened up to ships due to melting sea ice **(1 mark)** meaning more efficient trading routes. **(1 mark)** Or any other valid point.

Question			General marking instructions	Max mark	Specific marking instructions for this question
	(b)	(i) and (ii)	Award **1 mark** for each description of a strategy. Award **1 mark** for each evaluative point. Award **1 mark** each for further developed/detailed evaluative comments. Award **a maximum of 5 marks** for descriptive points. Do not award marks for reversals. Award **1 mark** where candidates provide specific named examples which further develop the answer.	**8**	Points may include: • the Thames Flood Barrier **(1 mark)** is a series of gates which can be raised across the river to prevent sea water flooding London. **(1 mark)** This has successfully protected London from flooding on numerous occasions. **(1 mark)** However, a second barrier may be needed to cope with flooding beyond 2070 **(1 mark)** • advance warning systems need to be further developed to advise householders of the potential risks of flooding **(1 mark)** • the UK has implemented hose-pipe bans to reduce water usage in drought periods **(1 mark)** but these are unpopular and difficult to enforce **(1 mark)** • a desalination plant has been built in London to provide additional fresh water in drought. **(1 mark)** This uses 100% renewable energy to operate **(1 mark)** however some feel the money should have been invested in reducing water wastage **(1 mark)** • Scotland is reducing greenhouse emissions by increasing energy production from renewables **(1 mark)** which were meeting 50% of the demand by the end of 2015. **(1 mark)** Or any other valid point.

Question			General marking instructions	Max mark	Specific marking instructions for this question
4.	(a)	(i) and (ii)	Award **1 mark** for each description of a trend. Award **1 mark** for each reason. Award up to **3 marks** for description points.	**10**	Points may include: • the biggest increase in energy demand is taking place in China **(1 mark)** which requires lots of energy to construct infrastructure **(1 mark)** • an increase in population growth in South-East Asia and China **(1 mark)** leads to increased demands for electricity for lighting and appliances such as televisions. **(1 mark)** Industry in China is based on energy-hungry manufacturing industries **(1 mark)** • in a global economy many of the manufactured products are sold to developed countries, **(1 mark)** and therefore oil is used to transport these around the world **(1 mark)** • Asia's consumption has risen by around 1000 MTOE. **(1 mark)** This may be due to a large increase in passenger air travel **(1 mark)** which has led to the construction of a large number of airport terminals and increased aeroplane use, particularly in South-East Asia **(1 mark)** • as people in developing countries become more prosperous, **(1 mark)** car ownership rates will also increase **(1 mark)** • the smallest increase is in South America/Africa. **(1 mark)** This is due to lower levels of industrialisation **(1 mark)** • energy consumption in developing countries is still increasing, however it is slowing down **(1 mark)** due to attempts to tackle global climate change. **(1 mark)** Or any other valid point.

Question			General marking instructions	Max mark	Specific marking instructions for this question
	(b)		Award **1 mark** for each point on effectiveness. Candidates must discuss a renewable source of energy. Award **0 marks** for non-renewable sources of energy. Award **2 marks** for specific, appropriate named examples which further develop the answer.	**10**	Possible answers for all renewable energy sources might include: • struggle to meet demand of energy at peak times **(1 mark)** such as early evening due to rise in use of home appliances for evening meals **(1 mark)** • output is variable and depends on the weather conditions. **(1 mark)** This means that there are times when more energy is available than is required which might be difficult to store, **(1 mark)** whilst at other times turbines may be switched off due to over-production **(1 mark)** • electricity may be lost in transferring from areas of production to areas of higher demand/population. **(1 mark)** For hydroelectric power (HEP) other possible answers could include: • even countries like Norway have to import electricity from Sweden during drier months **(1 mark)** • run-of-the-river power stations rely on the flowing water of a river **(1 mark)** and when the river is in spate potential power production is lost **(1 mark)** • conventional HEP stations dam the river to create capacity, however this floods large areas of land **(1 mark)** such as Three Gorges **(1 mark)** which has social consequences such as displacement of people **(1 mark)** • turbines can be easily and cheaply added to water storage reservoirs **(1 mark)** allowing power to be generated from pre-existing infrastructure **(1 mark)** • pump-storage dams effectively allow power to be stored, **(1 mark)** for example Ben Cruachan, **(1 mark)** as water is pumped to an upper reservoir at times of low demand. **(1 mark)** This water can then be released at times of higher demand to generate energy. **(1 mark)** Or any other valid point.

Section 2 — Application of geographical skills

Question			General marking instructions	Max mark	Specific marking instructions for this question
5.	(a) and (b)		Candidates should make reference to all sources, including the Ordnance Survey map, when discussing the suitability of the site and the social, economic and environmental impacts of the housing development on the surrounding area. Award **1 mark** for each description of the site, or explanation of suitability of the site. Award **1 mark** for each impact, and award a further mark where the candidate develops this. Award **1 mark** where candidates refer to the resource and award a further mark where the candidate offers an explanation of its suitability (beyond the wording of the resource).	**20**	Possible advantages of the location: • the site is located close to a number of transport links **(1 mark)** such as the M5 to the east **(1 mark)** leading to Weston-super-Mare which will allow for commuting **(1 mark)** • the location is less than 1km from the railway station. **(1 mark)** (322470). **(1 mark)** this may appeal to a wide range of home buyers who may not wish to rely on a car for transport **(1 mark)** • the site is located on a large expanse of flat land **(1 mark)** and this, combined with ease of access, will lower construction costs **(1 mark)** • the site may also appeal to families as it is within driving distance of leisure activities **(1 mark)** such as Exmoor National Park **(1 mark)** • the site is also close to opportunities for scenic walks **(1 mark)** such as the River Parrett Trail **(1 mark)** • there will be an increase in demand for housing **(1 mark)** due to the employment opportunities created by the new power station. **(1 mark)** Possible disadvantages of the location: • the site which has been chosen lies less than 10 metres above sea level, **(1 mark)** therefore this area may be at risk of flooding in heavy rainfall **(1 mark)** • the area chosen is a floodplain **(1 mark)** and this may require expensive flood defences **(1 mark)** • the building of this development may also increase the risk of flooding in surrounding areas **(1 mark)** as run-off will increase from the development due to increase in impermeable surfaces **(1 mark)** • the development lies between a railway line and a main road **(1 mark)** leading to possible air and noise pollution **(1 mark)** • some residents may be concerned about possible safety issues **(1 mark)** relating to transport of radioactive material or waste from the nearby power station. **(1 mark)**

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			Award up to **4 marks** for map evidence which may include correct and appropriate grid references and/or place/road names. It is possible that some points referred to as a disadvantage may be interpreted by other candidates as a negative impact. Award marks for each point only once, where it is best explained. Candidates may expand on impacts in various ways, for example they may explain impacts of flooding as social, economic *and* environmental.		Impacts may include: • the increase in houses will help relieve pressure on the local housing markets **(1 mark)** which may have a shortage as a result of people moving into the area due to construction of the power station, **(1 mark)** and because the population in the area has increased by 18,000 between 1991 and 2011 **(1 mark)** • residents of Alstone, GR314468, **(1 mark)** may be unhappy that their quiet rural way of life may be disturbed by a large new housing development on their doorstep **(1 mark)** • construction companies will be attracted to this area **(1 mark)** creating a number of skilled jobs boosting the local economy. **(1 mark)** The increased risk of flooding may mean a rise in insurance premiums. **(1 mark)** Increased population may lead to improved income for local small businesses **(1 mark)** • the building of this development may bring an increase in traffic and congestion on roads **(1 mark)** as the increase in car owners may lead to more noise and air pollution **(1 mark)** • new flood defences may have an adverse consequence on nesting birds/aquatic wildlife in the surrounding area. **(1 mark)** Or any other valid point.

[END OF SPECIMEN MARKING INSTRUCTIONS]