

OCR



AS
Geography

Examination Matters



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Introduction

This CD consists of three parts. The first (pages 3–9) deals with examination advice and matters such as schemes of assessment and exam technique. The second part (pages 10–19) features specimen exam papers for Units F761 and F762, with a total of eight structured questions and eight extended writing questions. The final part (pages 20–54) contains the mark schemes for each question. These mark schemes give an indication of the key points to include in your answer, identified by the symbol , descriptions of levels of attainment, and an examiner's commentary, identified by the symbol , with advice on what makes a good answer.

It is important to view the content of the specification and the methods of examination as a whole. Learning for the examination is best done with assessment methods firmly in mind. But before you attempt specific questions, you should consult the sections *How to answer exam questions* and *Command words and phrases* on pages 7 and 8.

The examination questions on this CD should be used in conjunction with the AS textbook. Before attempting to answer the questions, read through the relevant sections in the textbook. Then consult the mark schemes. These tell you how examiners mark your answers (i.e. what they are looking for and the criteria against which your answers are assessed). Each mark scheme provides you with a guide to the content of good answers, and for questions that demand examples, appropriate case studies drawn from the textbook. In this connection you should note that some case studies are relevant to more than one topic. You should refer to Figure 1.2 (page 6) for details of the application of case studies to specific topics.

Exam advice

Scheme of assessment

Table 1.1 shows what you have to do in the written examinations for F761 and F762. Each paper consists of two Sections, A and B. Section A contains four structured questions (one for each option), and Section B has four extended-writing or essay questions (again, there is one question for each option).

Table 1.1 Scheme of assessment

Unit	% of AS assessment	Style of assessment	Raw marks	Time allowed
F761 Managing Physical Environments	50	Section A: answer two structured questions, each from a different option, subdivided into four short- to medium-length answer questions	50	1.5 hours
		Section B: answer one extended-writing question from an option not chosen in Section A	25	
F762 Managing Change in Human Environments	50	Section A: answer two structured questions, each from a different option, subdivided into four short- to medium-length answer questions.	50	1.5 hours
		Section B: answer one extended-writing from an option not chosen in Section A.	25	

F761 Managing Physical Environments

- Section A: **Two** structured questions, **one** from **either** River environments **or** Coastal environments, **and one** from **either** Cold environments **or** Hot arid and semi-arid environments.
- Section B: **One** extended-writing question, chosen from a topic **not selected** for the two structured questions.

F762 Managing Change in Human Environments

- Section A: **Two** structured questions, **one** from **either** Managing urban change **or** Managing rural change, **and one** from **either** The energy issue **or** The growth of tourism.
- Section B: **One** extended-writing question, chosen from a topic **not selected** for the two structured questions.

Given these restrictions on choice of questions, it is clear that to maximise your score you must, at the outset, **read all of the questions in Sections A and B**. For instance, if you found that you could answer the structured questions on River environments and Coastal environments equally well, but that the extended-writing question on Coastal environments was the easiest of the four, the sensible option would be to select the structured question on River environments and the essay on Coastal environments.

Structured questions

The structured questions are divided into four sub-questions, worth 4, 6, 6 and 9 marks respectively. Two of these sub-questions require knowledge of one or more geographical examples, and two are usually linked to stimulus materials, such as maps, charts, photographs and diagrams.

Structured questions are worth 50 out of the 75 raw marks available for each unit. Thus, in a 1.5-hour exam, you should devote approximately 30 minutes to each structured question. Around one-third of this time (10 minutes) should be used to answer the 9-mark sub-question.

Extended-writing questions

Section B in Units F761 and F762 requires you to answer an extended-writing or essay-style question. You should allow yourself approximately 30 minutes to do this. The questions demand description, explanation, some evaluation and, most importantly, detailed reference to examples and case studies.

Mark scheme criteria

Examination answers are assessed against a number of criteria. For AS Geography there are three criteria or assessment objectives (AOs). These are as follows:

- 1 **Demonstrate knowledge and understanding** of the specification content, concepts and processes.
- 2 **Analyse, interpret and evaluate** geographical information, issues and viewpoints, and apply them in unfamiliar contexts.
- 3 **Investigate, conclude and communicate**, by selecting and using a variety of methods, skills and techniques to investigate questions and issues, reach conclusions and communicate findings.

It is useful for you to know exactly how your answers will be judged. If you look at the mark schemes (on pages 20–54) you can see how these assessment criteria are applied. Table 1.2 shows the weighting given to each AO.

Table 1.2 Assessment objective weightings at AS

Unit	Title	% of AS			Total
		AO1	AO2	AO3	
F761	Managing Physical Environments	25	10	15	50
F762	Managing Change in Human Environments	25	10	15	50
	Total	50	20	30	100

Preparing for exams

Success in examinations at AS and A-level depends primarily on two things:

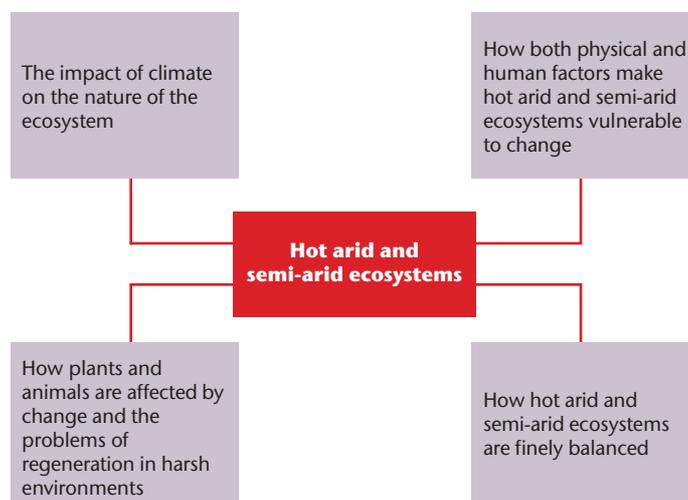
- your knowledge and understanding of the specification content
- your ability to apply your knowledge and understanding accurately to the questions in the examination

How to revise

No doubt much of your revision will concentrate on learning ideas, theories, explanations and case studies. However, this must not be done indiscriminately. Instead, your revision should be structured around the **questions for investigation, key ideas** and **content** set out for each topic in the specification. This structure will help focus your learning on those themes commonly used in assessment. For example, if you were revising ecosystems in hot arid and semi-arid

environments, it would be sensible to organise your learning around key ideas, such as the impact of climate on desert ecosystems, the fragility of desert ecosystems, and the vulnerability of desert ecosystems to human activity and climate change (see Figure 1.1).

Figure 1.1 Revising ecosystems in hot arid and semi-arid environments



Lists of key ideas are essential revision tools, and these are headlined in your AS textbook at the start of each new topic. In addition, the subheadings for each topic correspond to the key ideas set out in the specification.

To recap, revision has to be more than a passive process, where you work chronologically through your notes. It must be structured and tailored to the requirements of assessment in the exam. You will find that an intelligent, organised approach is a more stimulating, rewarding and, ultimately, effective way to revise.

The importance of case studies

An important feature of the OCR AS Geography specification is its emphasis on exemplification through in-depth case studies. All of the extended-writing questions in Section B, and at least one structured question in Section A, require examples that refer to specific geographical areas. For this reason, generalised answers cannot achieve the highest levels of attainment (see the mark schemes on pages 20–54). Your revision of content for each topic must therefore include one, or sometimes two, case studies.

In your textbook, each option topic is illustrated with several case studies. However, you should note that many of these case studies are appropriate for more than one topic. For example, tourism on the Costa del Sol, which appears in the Coastal environments section, could also be used for the Growth of tourism option; and the study of the Colorado River in the River environments section is also applicable to the Hot arid and semi-arid environments and Energy issue options. Several other case studies have similar flexibility. You can identify these links in Figure 1.2.

Figure 1.2 Case study links in the OCR AS Geography textbook

River environments	Coastal environments	Cold environments	Hot arid and semi-arid environments	Managing urban change	Managing rural change	The energy issue	Growth of tourism
Brandy Gill (p. 10)	Coastal scenery and shoreline management in Yorkshire (pp.67, 101)	Glacio-fluvial erosional landforms (p. 126)	Opportunities and challenges in the Draa Valley, Morocco (p. 179)	Sunderland — internal structure (p. 207)	Wensleydale — a rural region (p. 247)	Sweden's energy mix (p. 296)	Thailand (p. 331)
La Plata drainage basin (p.29)	Bangladesh coastal conflict and management (p.88)	Cairngorm ecosystem (p. 139)	Arches National Park (p. 182)	Buenos Aires — internal structure (p. 210)	Västernorrland — development in a peripheral rural region (p. 251)	India's energy mix (p. 299)	Iceland (p. 332)
Colorado River (p.34)	Costa del Sol: tourism and urban growth (p. 92)	Oil industry and conflict in Alaska (p. 147)	Land degradation in Mali (p. 188)	Poverty, deprivation and planning in Leeds (p. 216)	Rural decline in Nebraska (p. 257)	Three Gorges Dam, China (p. 302)	St Kitts and Nevis (p. 334)
Prague floods (p. 45)	Managed retreat at Freiston (p. 100)	Västernorrland — development in a peripheral rural region (p. 251)	Desertification in central China (p. 191)	Kibera informal settlement, Nairobi (p. 223)	Counter-urbanisation in Chester County, Penn. (p. 263)	Oil in the Niger Delta (p. 305)	Tenerife (p. 342)
Ribble drainage basin (p.48)	Coastal erosion at Happisburgh (p. 100)		Salinity control in Pakistan (p. 194)	Transport and pollution in Santiago de Chile (p. 229)	Farming and environment in East Anglia and the Fens (p. 266)	California — sustainable energy (p. 309)	Lake District National Park (p. 352)
Three Gorges Dam, China (p. 302)	Coastal management in Christchurch Bay (p. 102)		Colorado River (p. 34)	London — landfill and urban regeneration (pp. 233, 236, 238)	Langton Grove Farm, Eye (p. 273)	Oil industry and conflict in Alaska (p. 147)	La Plata drainage basin (Iquazu Falls) (p. 29)
				Sustainable ecocity — Dongtan, China (p. 240)	Rural settlement and planning in East Anglia (pp. 276, 278)	La Plata drainage basin (Itaipu) (p. 29)	Arches national park (p. 182)
				Counterurbanisation in Chester County, Penn. (p. 263)	Desertification in central China (p. 191)	Colorado River (HEP) (p. 34)	Costa del Sol: tourism and urban growth (p. 92)

How to answer exam questions

Answering structured questions

Structured questions have a gradient of difficulty. The initial sub-questions are less demanding than the later ones, and therefore carry fewer marks. Thus sub-question (a) often uses command words such as 'describe' or 'outline', while subsequent questions may require explanation, examples and evaluation.

Stimulus materials are used both directly and indirectly. For direct use, OS maps and photographs are provided to assess key skills, such as map reading and interpretation. Charts and sketch maps may be supplied, to assess your ability to summarise and recognise spatial patterns and trends. For indirect use, stimulus materials are presented as a catalyst for assessing your wider knowledge and understanding of a topic.

All mark schemes for structured questions are levels-based, with two levels of attainment for 4- and 6-mark questions, and three levels for 9-markers. Careful study of the mark schemes on pages 20–39 will help you to appreciate what exactly examiners are looking for. You will notice that marks are loaded towards the top end. So, for example, in a 9-mark question a level 3 answer will achieve 8 or 9 marks.

When answering structured questions, you should follow these guidelines:

- Read through all parts of the question before attempting to answer. This will help you to avoid repetition in later answers and allow you to get an overview of how the topic is developed.
- Study any stimulus material carefully.
- Before you start writing, make sure that you understand precisely what each question is asking you to do.
- For 9-mark questions, which may run to 20 answer lines, you will need to plan. Make a list of the key points and specific examples you want to include in your answer.
- Divide your time realistically and adjust the length of your answers to the mark weighting. A 4-mark question is unlikely to require more than 10 lines, whereas for a 9-mark question you would need to write approximately twice as much.

Answering extended-writing questions

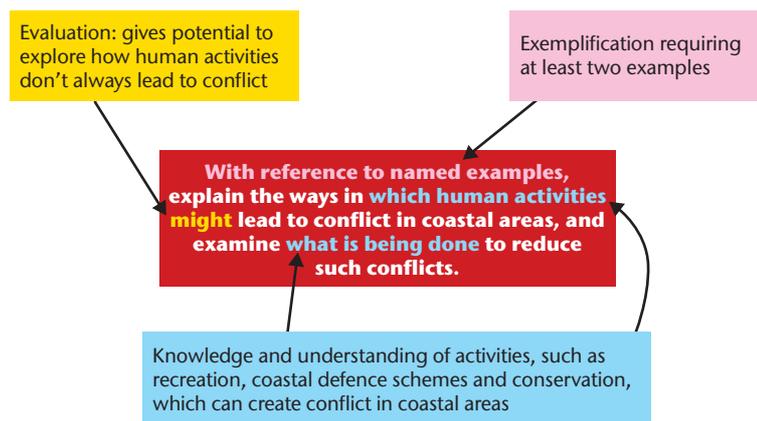
Have a close look at the mark schemes on pages 40–54 to appreciate the criteria against which your extended writing will be assessed. You will see that each assessment objective is divided into three attainment levels, with a maximum of 13 marks for knowledge and understanding, 5 for analysis and application and 7 for skills and communication. The relatively large weighting given to skills and communication emphasises the importance of accurate spelling and grammar, as well the ability to structure your answer and provide a clear conclusion.

Extended-writing questions have a number of common features:

- They require description and explanation.
- They require some evaluation (i.e. the questions often include some conditional words, such as 'might', 'may', 'could' or 'can').
- They always require detailed exemplification using at least two (sometimes contrasting) geographical case studies.

An example of a typical extended-writing question is given in Figure 1.3. It shows how, within the question, there are opportunities to assess knowledge and understanding, evaluation and exemplification.

Figure 1.3 A typical extended-writing question



Planning answers to extended-writing questions

You should reserve 4 or 5 minutes for thinking time and for writing a brief plan of your answer. The plan should outline the general content of each paragraph and the geographical examples you intend to use to support your answer. Remember that the structure of your answer (including spelling, punctuation and conclusion) will be measured against AO3. Careful planning, therefore, is of particular importance. Your answer should have three main components: an introduction, a main body and a conclusion. These components will be exemplified here by referring to the question in Figure 1.3:

- **Introduction** The introduction should (a) define any key terms used in the question, such as 'human activities' and 'conflict', and (b) indicate the broad structure of your answer. In this example, you might list the human activities and the conflicts they create. The introduction should be brief and businesslike: four or five lines should be sufficient.
- **Main body** This is where you develop the list of points in your introduction. For example, you could write a paragraph to show how the offshore mining of sand and shingle in a coastal area might give rise to the erosion of beaches. The connection between mining and erosion would be explained and then illustrated with reference to specific examples, such as Hallsands in Devon. Other paragraphs could concentrate on: the impact of hard-engineered coastal defences on sediment supplies and beach erosion (e.g. Westport in Dorset, Holderness in east Yorkshire); managed retreat leading to planned flooding of lowland coasts; and coastal industrial development in environmentally sensitive areas.
- **Conclusion** This should be a brief summary of the points developed in your answer. Where appropriate, it may need to include some evaluation. In this example, there may be scope for arguing that human activities do not necessarily result in conflict.

Command words and phrases

Command words and phrases in examination questions are crucial because they tell you what you have to do. You must respond precisely to their instructions. For example, the instruction 'describe' is very different from 'explain'. Ignoring command words and phrases is a fundamental error, and is a common cause of under-achievement. Table 3 lists the common command words and phrases used in questions in the OCR AS Geography examination and explains what they require you to do.

Table 1.3 Key command words and command phrases

Command word/phrase	Requirements
Describe	Provide a picture in words of a feature, pattern or process. Descriptions in short-answer questions are likely to be worth 4 or 6 marks and will require some detail.
Outline	The same as 'describe' but requiring less detail. The idea is to identify the basic characteristics of a feature, pattern or process.
Compare	Describe the similarities and differences of at least two features, patterns and processes.
Examine	Describe and comment on a pattern, process or idea. 'Examine' often refers to ideas or arguments, which demand close scrutiny from different viewpoints.
Why?/Explain/Account for/ Give reasons	Provide the causes of a feature, phenomenon or pattern. This usually requires an understanding of processes. Explanation is a higher-level skill than description and this is reflected in its greater mark weighting in examinations.
To what extent?/Assess/ Discuss	These commands are evaluative. You need to consider the evidence connected to an issue or problem and make reasoned judgements. This is the highest-level skill required by the AS examination and is more appropriate for extended writing answers in Section B.

Practise writing your own answers

Before sitting the final examination you will need plenty of practice answering structured and extended-writing questions. In total, your textbook and this CD contain 24 structured questions and 24 extended-writing questions. Together, these cover most of the themes that are likely to appear in the final examination.

You should integrate the answering of examination questions with your revision of each topic. Start with the questions on this CD, and write an outline answer for each question. Each outline should include relevant content and, where appropriate, arguments and examples. Use the mark schemes to help you — these provide indicative content, descriptions of levels of attainment, and critical examiners' comments to help you. Finally, refer to the questions in the textbook (without mark schemes) and, under timed conditions, plan and write out full answers.

Questions

Section A: structured questions

River environments

Question 1



Figure 2.1

- a** Identify and describe the main fluvial features shown in Figure 2.1. (4 marks)
- b** Explain the processes responsible for the formation of the features identified in (a). (6 marks)

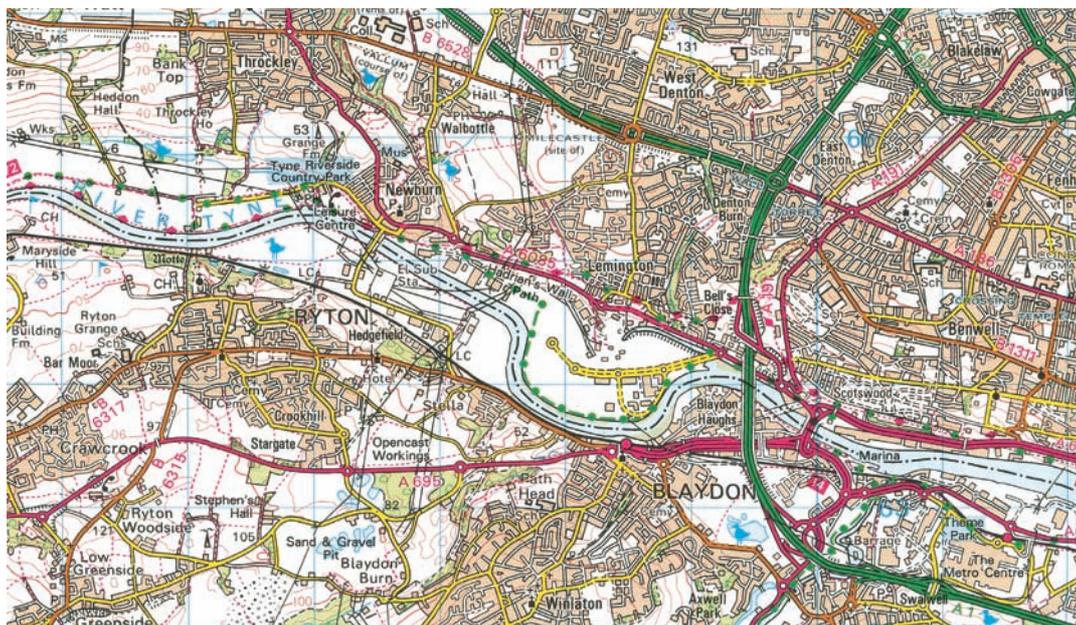


Figure 2.2

- c** Using the evidence of Figure 2.2, show how river landscapes provide opportunities for a range of human activities. (6 marks)
- d** With reference to named examples, explain why some river basins are more naturally vulnerable to flooding than others. (9 marks)

Coastal environments

Question 2



Figure 2.3

- a** Describe the main physical features of the coastline in Figure 2.3. (4 marks)
- b** Explain the formation of the physical features described in (a). (6 marks)



Figure 2.4

- c** Using Figure 2.4, explain how coastal protection can take a variety of different forms. (6 marks)
- d** With reference to one or more named examples, explain why coastal management increasingly favours soft engineering and managed retreat. (9 marks)

Cold environments

Question 3

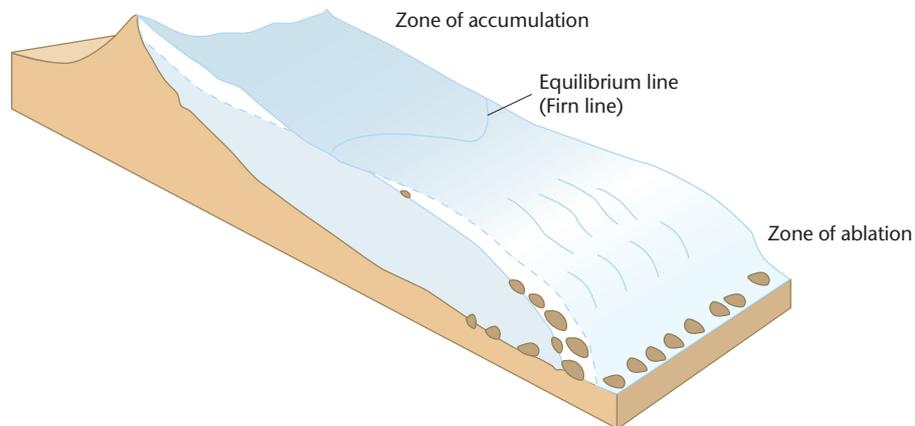


Figure 2.5 Valley glacier: zones of accumulation and ablation

- Using Figure 2.5, describe the main features of the mass balance of a glacier. (4 marks)
- Explain how changes in mass balance can affect the behaviour of glaciers. (6 marks)
- Explain the formation of the variety of morainic features that occur in glaciated lowland regions. (6 marks)

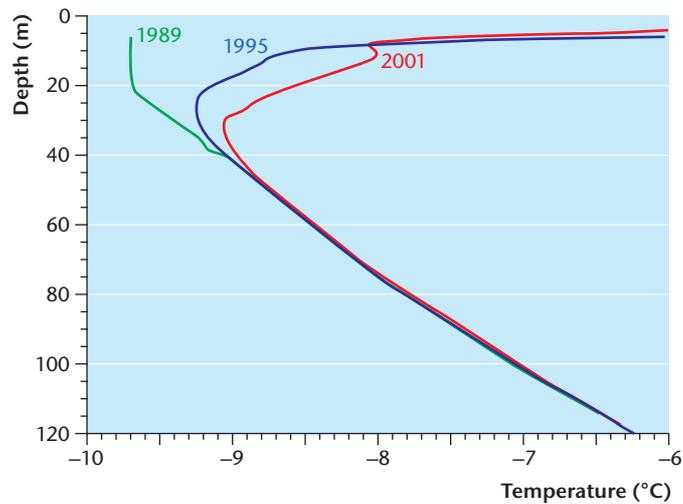


Figure 2.6 Permafrost temperatures in East Teshekpuk, Alaska

- With reference to Figure 2.6, and one or more named examples, comment on the problems associated with development in cold environments. (9 marks)

Hot arid and semi-arid environments

Question 4

Table 2.1 Climate at Riyadh, Saudi Arabia (25°N, 47°E)

Month	Mean min. temperature (°C)	Mean max. temperature (°C)	Mean precipitation (mm)
January	8	21	3
February	9	23	20
March	13	28	23
April	18	32	25
May	22	38	10
June	25	42	0
July	26	42	0
August	24	42	0
September	22	39	0
October	16	34	0
November	13	29	0
December	9	21	0

- a** Use Table 2.1 to describe the main features of the climate at Riyadh in Saudi Arabia. (4 marks)
- b** Explain the weathering processes that are likely to occur in hot arid and semi-arid environments. (6 marks)
- c** Explain how running water has influenced the development of landforms in hot arid and semi-arid environments. (6 marks)

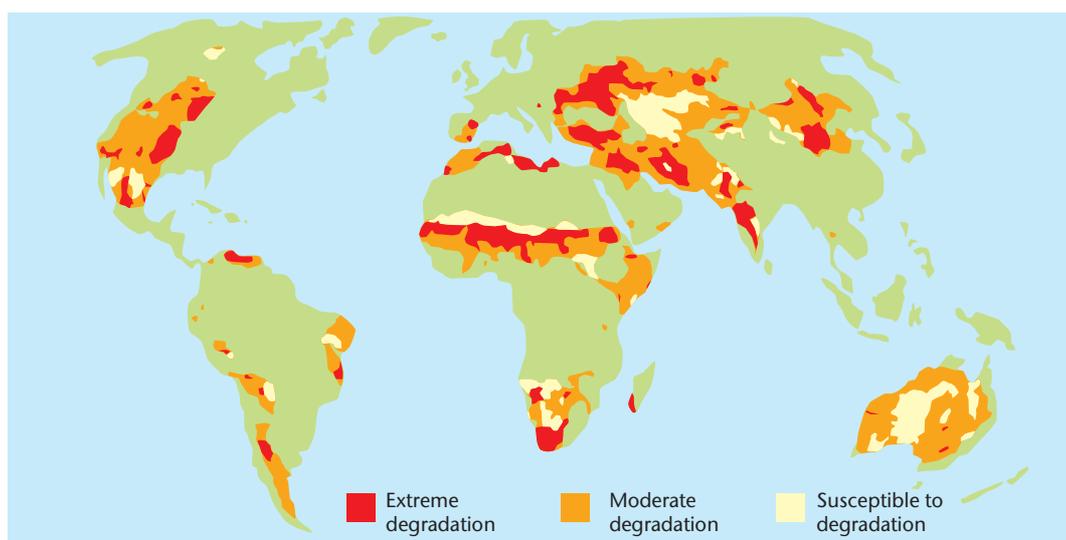


Figure 2.7 Land degradation in the world's drylands (source: UNEP)

- d** With the aid of Figure 2.7, and with reference to one or more named examples, explain how human activities can often cause irreversible damage to hot arid and semi-arid environments. (9 marks)

Managing rural change

Question 5

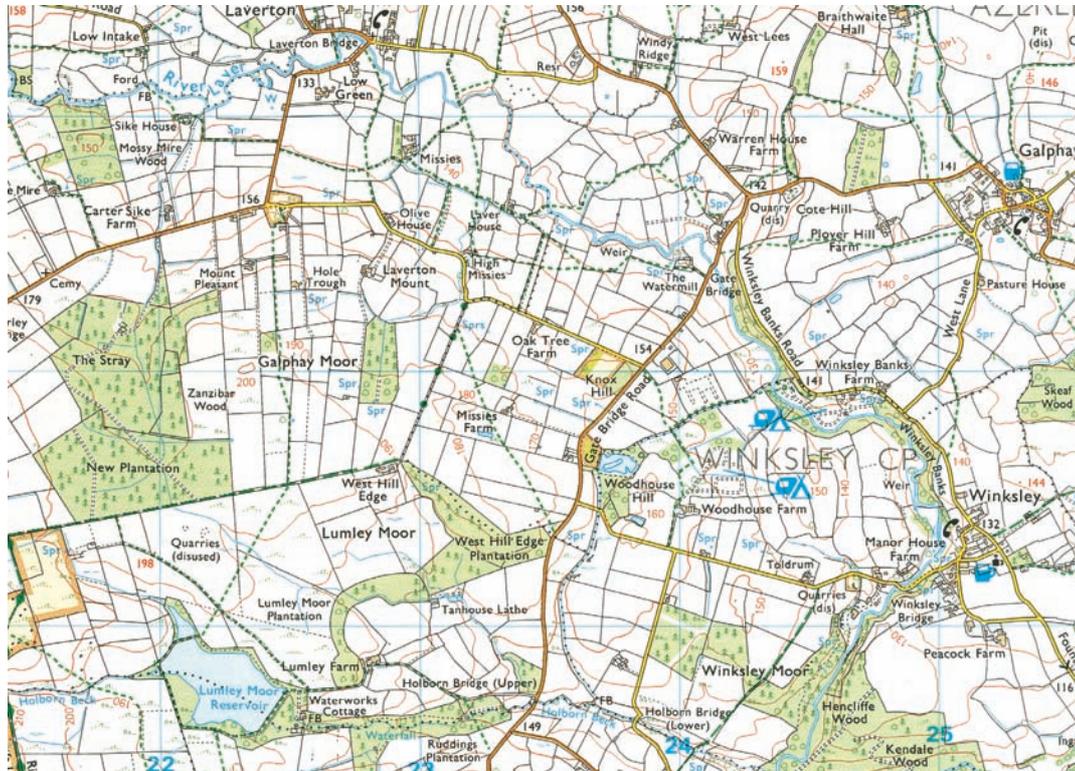


Figure 2.8

- a** Using evidence from the OS map extract, describe the main characteristics of land use in Figure 2.8. (4 marks)
- b** Using evidence from Figure 2.8, explain how rural resources provide opportunities for economic activities in the area. (6 marks)
- c** With reference to one named rural area, examine the factors that have led to the area's decline. (6 marks)
- d** With reference to one or more rural areas, show how changes in agriculture can affect the natural environment. (9 marks)

Managing urban change

Question 6

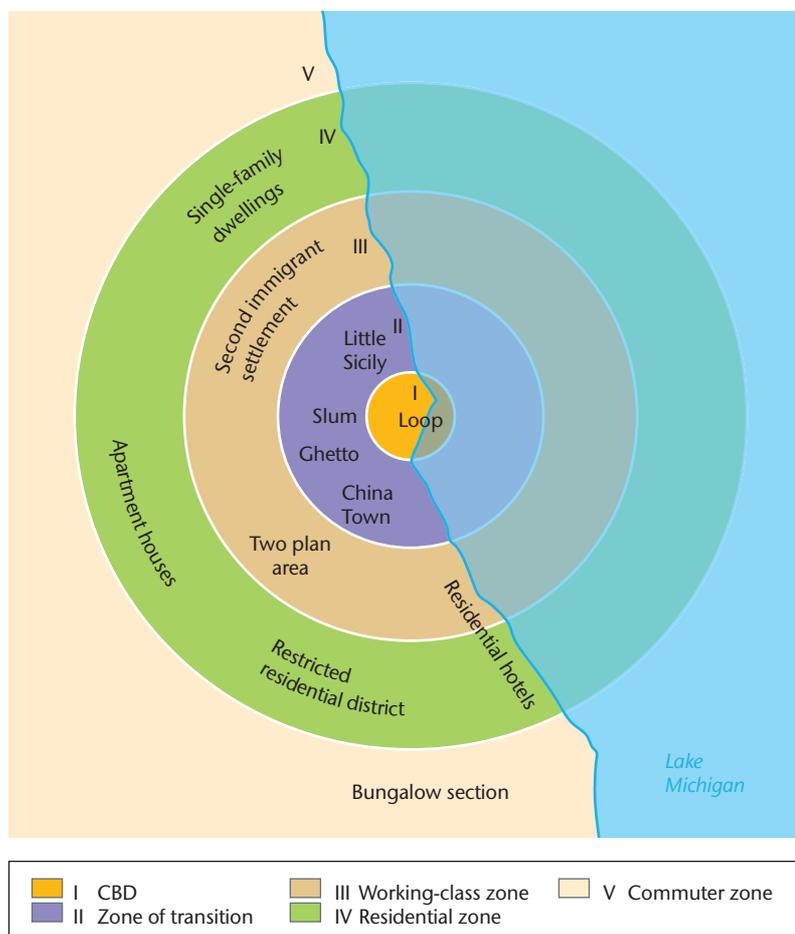


Figure 2.9 Burgess's concentric zone model as applied to Chicago

- a** Describe the pattern of urban land use in the city of Chicago in Figure 2.9. (4 marks)
- b** With reference to Figure 2.9, suggest two factors that may have influenced the spatial pattern of land use in Chicago. (6 marks)
- c** With reference to one named urban area, describe the main features of multiple deprivation. (6 marks)
- d** With reference to one or more named urban areas, explain why multiple deprivation is often concentrated geographically in specific neighbourhoods in cities. (9 marks)

The energy issue

Question 7

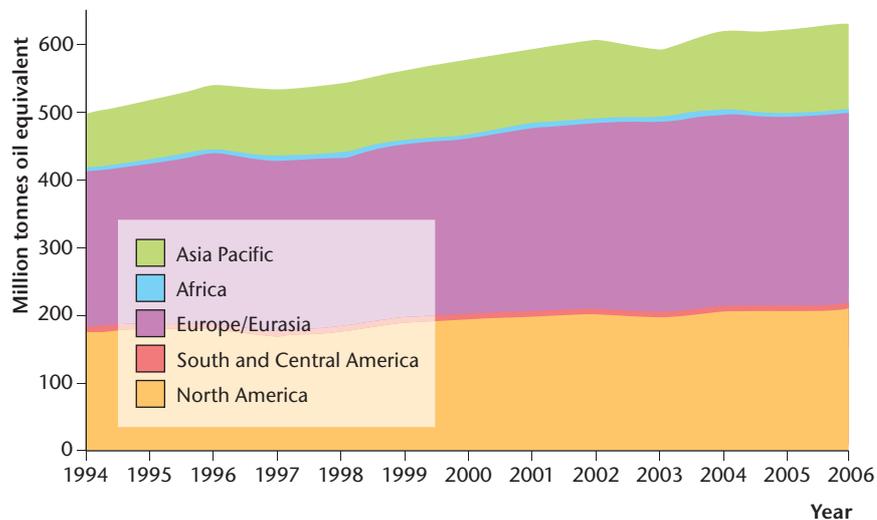


Figure 2.10 Regional nuclear power production, 1994–2006

- a** Study Figure 2.10, which shows regional nuclear power production between 1994 and 2006.
- i** Describe the pattern of nuclear power production in Figure 2.10. (4 marks)
 - ii** Suggest reasons for the pattern of nuclear power production described in (i). (6 marks)
- b** Describe the typical energy mix of countries at the lower end of the development spectrum. (6 marks)
- c** With reference to one or more named examples, explain how energy supplies can be managed to ensure sustainability. (9 marks)

The growth of tourism

Question 8

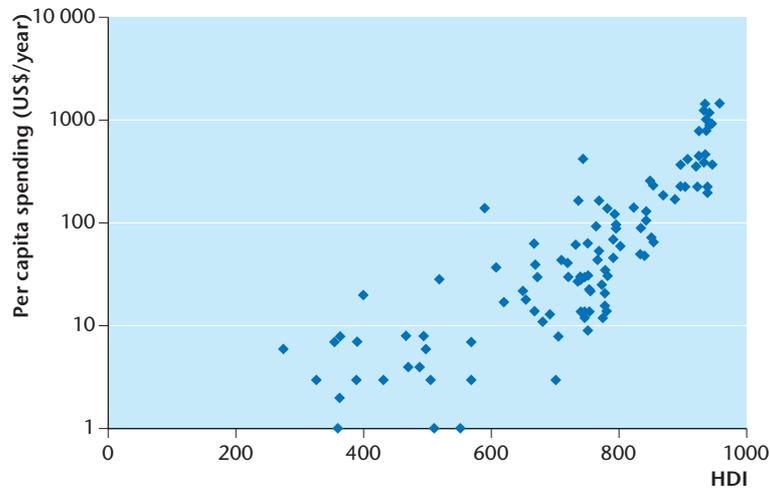


Figure 2.11 Levels of development and per capita spending on tourism, 2005

- a** Study Figure 2.11, which shows the relationship between levels of development and per capita spending on tourism in a selection of countries.
- i** Describe the relationship between levels of development and per capita spending in Figure 2.11. (4 marks)
 - ii** Suggest reasons for the relationship described in (i). (6 marks)
- b** Examine the ways in which tourism can have positive effects on the environment. (6 marks)
- c** With reference to one or more named examples, explain how issues of sustainability are playing an increasingly important role in the management of tourism. (9 marks)

Section B: extended-writing questions

Unit F761

- 1 With reference to named examples, explain how management might help to resolve conflicts between development and flood risk issues.** (25 marks)
- 2 With reference to named examples, explain how management is needed to resolve development issues and conflicts in coastal environments.** (25 marks)
- 3 With reference to named examples, explain how cold environments can be managed to ensure their sustainability.** (25 marks)
- 4 With reference to named examples, explain how hot arid and semi-arid environments might be managed to ensure sustainability.** (25 marks)

Unit F762

- 5 With reference to named examples, describe and explain how planning and management are tackling the economic and social problems of rural areas in MEDCs.** (25 marks)
- 6 With reference to named examples, describe and explain attempts by planners to reduce the impact of cities on the physical environment.** (25 marks)
- 7 With reference to named examples, describe and explain how the development of tourism often requires a careful balance between the economic and social needs of local people, and conservation of the environment.** (25 marks)
- 8 With reference to named examples, explain how the development of energy resources creates both opportunities and problems for people and society.** (25 marks)

Mark schemes

Section A: structured questions

River environments

Question 1

a Identify and describe the main fluvial features shown in Figure 2.1.

 The main features are: meander, point bar, river cliff, floodplain, bluff.

Level	Mark	Descriptor
2	3–4 marks	Candidates use clear description of landscape and individual features within it. Use of accurate terminology to describe the features.
1	0–2 marks	Candidates use basic descriptions that identify the whole nature of the landscape. Limited or inaccurate appreciation of individual features and limited use of terminology.

 Descriptions should concentrate on the shape/make-up (planform, cross-section, materials etc.) of features. The meander shows the sinuosity of the river's course, with shallower water on the inside of the meander. The point is on the inner bank and slopes gently upwards from the channel; it comprises gravels and other coarse sediment. The river cliff is steep and there is evidence of instability due to undercutting. The flat valley floor comprises the floodplain. Low bluffs in the distance mark the edge of the valley. Remember that explanation is not required by this question.

b Explain the processes responsible for the formation of the features identified in (a).

 Meanders most often develop in coherent bank material (e.g. clay, silt). They develop from the sinuous flow of water in straight channel (due to friction between the flow and the channel boundaries), which induces alternating areas of channel erosion and deposition. Point bars are caused by helical flow in meanders, which directs sediment towards the inner bank. River cliffs form where the active channel undercuts the valley slope, resulting in collapse and slope steepening (weathering, mass movement). Floodplains are due to lateral erosion by meanders rivers, which widens valleys, and the deposition of sediments, which form the bedload (coarse) and washload (fine). Bluffs are the steeper slopes that mark the edge of the valley. Their gentler, rounded slopes are formed by sub-aerial processes such as soil creep and slumping.

Level	Mark	Descriptor
2	5–6 marks	Candidates show clear understanding of a range of appropriate processes, with detailed understanding. Highest-level answers may go beyond fluvial processes (i.e. to weathering and mass movement). Use of accurate terminology to describe different processes.
1	0–4 marks	Candidates show some appreciation of the range of processes that created the features, but with limited understanding of the dynamic nature of these processes. Gaps in use of technical language.

- e** Answers could be structured around individual features (e.g. meanders, floodplains) or around processes (e.g. erosion, deposition, mass movement). It should be made clear how processes are related to particularly landforms (features). Explanations of relevant processes *per se* are not enough to reach Level 2.

c Using the evidence of Figure 2.2, show how river landscapes provide opportunities for a range of human activities.

- Key** Recreation, leisure and industrial activities evident on the OS map include: a marina, countryside park, leisure centre, various ‘works’, a sub-station, housing. The opportunities provided by river landscapes include: use of rivers for water-based recreation; availability of land reclamation of brownfield sites (e.g. formerly used by industry) in urbanised areas; flat land for building on floodplains; access to the river for transport; access to the river for water supply; access to the river for effluent disposal.

Level	Mark	Descriptor
2	5–6 marks	Candidates identify a wide range of uses. Clear reference to the map extract. Detailed understanding of the opportunities provided by river landscapes.
1	0–4 marks	Candidates make limited use of the map to identify a number of uses. Show a limited understanding of the opportunities provided by river landscapes.

- e** This question requires a careful examination of the land uses found close to the River Tyne, and evidence of knowledge and understanding of the opportunities provided by river landscapes for human activities. A successful answer will link land uses to opportunities that extend beyond the most obvious relationships suggested by map evidence. For example, while it is straightforward to explain the link between rivers and water-based recreation, the location of industry alongside rivers is less obvious. A further stage removed would be the widespread industrial dereliction that has occurred at riverside sites in the past 30 years and the redevelopment of these brownfield sites for commercial, residential and recreational use.

d With reference to named examples, explain why some river basins are more naturally vulnerable to flooding than others.

- Key** The characteristics of river basins that influence flooding include: geology, land use (including vegetation cover), climate, relief, basin shape etc. These characteristics affect the proportion of precipitation that becomes runoff, lag times (the speed of water movement to river channels), snowmelt and peak flows.

Level	Mark	Descriptor
3	8–9 marks	Candidates use well-chosen examples to explain in detail why some river basins are more naturally vulnerable to flooding than others. Answers are well structured, with accurate use of spelling and grammar. Geographical terminology is used accurately.
2	5–7 marks	Candidates use examples to explain why some river basins are more naturally vulnerable to flooding than others. Answers may have poor structure with some inaccurate spelling and grammar. Use of geographical terminology shows some inaccuracy.
3	0–4 marks	Candidates make limited use of examples. Answers are largely descriptive and generalised. Communication is basic, with little structure and inaccurate spelling.

- e** Good answers will emphasise the comparative features of river basins to explain why some are more vulnerable to flooding than others. This means that your examples must be chosen carefully in order to bring out these differences. The simplest approach would be to compare two or three river basins with contrasting geology, climate, relief or land use. This approach would ensure that your answer makes the fullest use of examples. Care is needed in defining the term ‘naturally vulnerable’. It suggests that the presence or absence of flood control structures, or extensive development on floodplains, are irrelevant.

Coastal environments

Question 2

a Describe the main physical features of the coastline in Figure 2.3.

-  This is an upland coastline that faces north and east. The main physical features are: Runswick Bay, headlands such as Kettleness, cliffs, beaches and shore platforms.

Level	Mark	Descriptor
2	3–4 marks	Candidates make clear description of individual features, with specific use of map evidence. Use of accurate terminology to describe the features.
1	0–2 marks	Basic description of individual features, which is generalised and makes limited use of specific map evidence. Inaccurate use of terminology.

-  Descriptions should be organised by types of feature (e.g. erosional, depositional), rather than their geographical location on the coast. It is important to refer to specific map evidence, such as place names, feature names and grid references.

b Explain the formation of the physical features described in (a).

-  Headlands and bays may be explained in terms of the variable resistance of rocks to marine erosion, and the distribution of wave energy along the coasts (i.e. high energy on headlands, low energy in bays). Cliffs may be explained by the relief of the coast, erosion and the resistance of rocks to erosion and sub-aerial processes. Cliff recession is responsible for the formation of shore platforms. The beach in Runswick Bay appears to be swash-aligned and is associated with low-energy conditions and wave refraction.

Level	Mark	Descriptor
2	5–6 marks	Candidates show clear understanding of the appropriate factors, with detailed explanation. Where appropriate, highest-level answers will go beyond marine processes. Accurate use of terminology to identify the factors and processes responsible for the physical features.
1	0–4 marks	Some appreciation of the factors responsible for the physical features, but with limited understanding of processes. Inaccurate use of terminology.

-  You should know that the factors responsible for the formation of the physical features include dynamic processes and passive influences, such as geology and relief. Although marine processes like wave erosion (abrasion, hydraulic action), refraction and transport are most important, you should not overlook the influence of sub-aerial processes, such as weathering (e.g. on shore platforms) and mass movements (e.g. on cliffs).

c Using Figure 2.4, explain how coastal protection can take a variety of different forms.

-  Coastal protection structures in Figure 2.4 are gabions, sea walls and groyne.
- Gabions stabilise coastal slopes, reducing the threat of mass movements.
 - Groynes promote the accumulation of beach sediments.
 - Sea walls protect the coast from wave erosion.

Level	Mark	Descriptor
2	5–6 marks	Candidates should give detailed explanations of the three protection measures and how they operate.
1	0–4 marks	Candidates provide limited explanation of some or all of the protection measures and how they operate.

e It is important to be clear what each structure is protecting. The gabions are protecting the slope, the groynes are protecting the beach, and the sea wall is protecting the shoreline from erosion. How do these features protect the coastline? Gabions stabilise the coastal slope by reducing its angle and replacing it with a series of shallow terraces. Groynes intercept the longshore drift and beach drift of sand and shingle, allowing beaches to develop and remain in place. Beaches absorb wave energy and protect the shoreline from erosion. Sea walls stop all erosion by reflecting waves and lining the shore with concrete.

d With reference to one or more named examples, explain why coastal management increasingly favours soft engineering and managed retreat.

- e** Soft engineering includes beach nourishment and managed retreat (or managed realignment). Alternatives are hard engineering structures, such as sea walls, groynes, armour blocks etc. The arguments for soft engineering are:
- it is sustainable in the long term, especially during a period of climate change and rising sea levels
 - it works with natural processes rather than against them
 - it is environmentally friendly
 - it is cheaper than hard engineering

Level	Mark	Descriptor
3	8–9 marks	Candidates present a number of detailed and valid reasons, supported by well-chosen examples. Answers are well structured, with accurate grammar and spelling. Geographical terminology is used accurately.
2	5–7 marks	Candidates give a number of clear reasons, supported with reference to some examples. Answers may have poor structure, with some inaccurate grammar, spelling and terminology.
1	0–4 marks	Candidates present some valid reasons. There is limited use of examples. Communication is basic, with little structure and inaccurate spelling.

e Definitions of soft engineering and managed retreat are required. It will also be necessary to refer briefly to alternative 'hard engineering' measures. Separate paragraphs should be allocated to each reason for soft engineering and managed retreat approaches. Where possible, these arguments should be illustrated with specific examples. References could be made to managed retreat at Freiston Shore in Lincolnshire, the strategies used in the Shoreline Management Plan for the North Yorkshire coast (e.g. 'do nothing', managed realignment), and beach nourishment at Hurst Castle. Examples where 'hard engineering' structures have accelerated erosion (e.g. coastal squeeze) and disrupted sediment budgets are also appropriate.

Cold environments

Question 3

a Using Figure 2.5, describe the main features of the mass balance of a glacier.

-  The zone of accumulation is the upper parts of a glacier, where accumulation exceeds ablation and there is a positive balance. The lower areas of a glacier occupy the zone of ablation, where ablation (melting, sublimation) exceeds accumulation and there is a negative balance. The boundary between the two zones is the equilibrium line, where inputs of ice and snow are exactly balanced by outputs caused by ablation.

Level	Mark	Descriptor
2	3–4 marks	Candidates use Figure 2.5 to describe clearly and in detail the zones of accumulation and ablation, and the equilibrium line.
1	0–2 marks	Candidates list the main features but make little attempt to develop their answers.

-  It is important that descriptions do more than merely list the features in Figure 2.5. Development of the features will show knowledge of the differences between the zone of accumulation and the zone of ablation, and the significance of the equilibrium line.

b Explain how changes in mass balance can affect the behaviour of glaciers.

-  Increases in accumulation due to climate change increase the mass of glacier ice, lower the equilibrium line and cause the glacier to advance. Rising temperatures associated with climate change have the opposite effect. They increase ablation, push the equilibrium line higher into the mountains, and cause glaciers to retreat.

Level	Mark	Descriptor
2	5–6 marks	The link between changes in mass balance and glacier advance and retreat is clear. Answers explain both advance and retreat and there is accurate use of terminology.
1	0–4 marks	The link between mass balance and glacier behaviour is not explicit and explanation is generalised. There is some use of terminology.

-  It is useful to think of mass balance as a system. When inputs of snow and ice exceed outputs of meltwater and water vapour, glaciers have a positive mass balance and advance. Today, because of climate change, outputs exceed inputs, and most glaciers are in retreat. In this question it is vital to focus on the link between mass balance changes and glacier behaviour. Don't get sidetracked into discussing glacial processes such as erosion, transport and deposition.

c Explain the formation of the variety of morainic features that occur in glaciated lowland regions.

-  Among the relevant features are terminal moraines, recessional moraines, push moraines, lateral moraines, drumlins, till plains, hummocky moraines, lodgement till and ablation till. Different features may be grouped according to whether deposition was associated with moving ice or dead or stagnant ice.

Level	Mark	Descriptor
2	5–6 marks	Candidates emphasise the variety of morainic features in glaciated lowland regions. At least three features are explained clearly and in detail with accurate understanding of processes. There is appropriate use of terminology.
1	0–4 marks	Candidates list a number of relevant features. There is some appreciation of the processes involved. Limited use is made of appropriate terminology.

- e** This question requires clear explanations of the relationship between landforms and processes. Given the huge variety of morainic landforms it is advisable to select three or four contrasting types and explain them in some detail. For example, drumlins formed by advancing ice sheets, recessional moraines formed by retreating glaciers or hummocky moraines formed by melting, stagnant ice. A definition of moraine and some references to specific glaciated regions will help to differentiate Level 2 from Level 1 answers.

d With reference to Figure 2.6, and one or more named examples, comment on the problems associated with development in cold environments.

- e** Answers could refer to economic and environmental problems. Problems include:
- construction and development in low temperatures for much of the year
 - melting of permafrost, which shortens the season for economic activity, damaging infrastructure
 - low population densities
 - distance to markets
 - oil spillages
 - disruption of fragile ecosystems (e.g. migration of mammals and birds) etc.

Level	Mark	Descriptor
3	8–9 marks	Candidates consider a range of relevant and detailed problems, supported by one or more place-specific examples. Answers are well structured, with accurate use of grammar and spelling. Geographical terminology is used accurately.
2	5–7 marks	Candidates consider a range of relevant problems, supported by one or more examples. Answers may have poor structure, with some inaccurate grammar and spelling. Geographical terminology may be used inaccurately.
1	0–4 marks	Candidates consider some relevant problems, but with limited exemplification. Communication is basic, with little structure and inaccurate spelling.

- e** Figure 2.6 provides a useful prompt, reminding us that climate change is already having a massive impact on some cold environments. Ideally, you should aim for a balance between economic and environmental problems (say a minimum of two of each type). The cause–effect relationships between development and the economic and environmental problems should be prominent throughout. Where appropriate, the problems should be illustrated with examples.

Hot arid and semi-arid environments

Question 4

a Use Table 2.1 to describe the main features of the climate at Riyadh in Saudi Arabia.

 Winters are mild (mean January temperature 14.5°C) and summers are hot (mean July temperature 34°C). There is a relatively large mean annual range of temperature. There is also a large daily range of temperature (18°C in August). Mean annual rainfall is low. There are 7 months with no recordable rainfall. Rainfall is concentrated in spring, between February and April.

Level	Mark	Descriptor
2	3–4 marks	Candidates use Table 2.1 to describe clearly and in detail the temperature and rainfall patterns.
1	0–2 marks	Candidates list the more obvious features of the climate and provide limited exemplification.

e It is important that descriptions do more than merely list the obvious features of climate in Table 2.1. Good answers will make full use of the data, referring to mean monthly temperatures, average maximum and minimum temperatures, and rainfall distribution. It is important to support the general features you identify with some specific temperature and rainfall data from Table 2.1.

b Explain the weathering processes that are likely to occur in hot arid and semi-arid environments.

 The relevant processes are salt weathering, insolation weathering, hydrolysis and solution. Credit can also be given for exfoliation, although this is the outcome of chemical processes rather than a weathering process *per se*. At high altitudes, freeze–thaw may occur in winter.

Level	Mark	Descriptor
2	5–6 marks	Candidates explain accurately and in detail at least two relevant processes, and there is correct use of terminology.
1	0–4 marks	Candidates explain in detail one relevant process or give a general account of two or more processes, which lacks detail and precision. There is some use of terminology.

e A wide range of weathering processes operate in hot arid and semi-arid environments. Remember that moisture is present at times in these environments (e.g. dew, thunderstorms) and therefore plays an active role in rock disintegration. Successful answers will show a good understanding of at least two processes and make accurate use of terminology.

c Explain how running water has influenced the development of landforms in hot arid and semi-arid environments.

 Landforms that owe their development to runoff include canyons, playas, alluvial fans and bajadas. Many desert landforms may be fossil features that formed during wetter climatic periods.

Level	Mark	Descriptor
2	5–6 marks	Candidates explain at least two landforms accurately and in detail. The link between process and form is clear. There is appropriate use of terminology.
1	0–4 marks	Candidates may explain in detail one relevant landform or may list a number of relevant landforms with limited explanation. Restricted use is made of appropriate terminology.

- e** Good answers will identify at least two relevant landforms and concentrate on the linkage between process and form. For example, the emphasis in the formation of alluvial fans will be the sudden loss of energy of ephemeral rivers carrying heavy sediment loads, as they emerge from narrow upland valleys into lowland basins. Explanation can be assisted by the use of appropriate diagrams and accompanying annotations. Some reference to climate change, and an understanding that many desert landforms cannot be explained by present-day processes, would be useful.

d With the aid of Figure 2.7, and with reference to one or more named examples, explain how human activities can often cause irreversible damage to hot arid and semi-arid environments.

- e** Content will focus on land degradation and desertification. Human factors responsible for land degradation and desertification include over-grazing, over-cultivation, deforestation, over-irrigation and poor drainage. Drought often exacerbates poor land management. There are degrees of land degradation, from a decline in the disappearance of some plant species to widespread soil erosion and salinisation. Desertification is extreme degradation, where formerly productive land becomes desert.

Level	Mark	Descriptor
3	8–9 marks	Candidates consider a range of relevant and detailed causes and effects, supported by one or more place-specific examples. Answers are well structured with accurate use of grammar and spelling. Geographical terminology is used accurately.
2	5–7 marks	Candidates consider a range of relevant causes and effects, supported by one or more examples. Answers may have poor structure, with some inaccurate grammar and spelling. Geographical terminology may be used inaccurately.
1	0–4 marks	Candidates consider some relevant causes. Cause and effect are weakly developed and there is limited exemplification. Communication is basic, with little structure and inaccurate spelling.

- e** Study Figure 2.7 closely, because it tells you that land degradation should be the focus of your answer, that the geographical incidence of degradation is widespread and that its effects vary in their severity. Successful answers will emphasise the relationship between human activity and land degradation and will investigate at least two causes (e.g. over-grazing, deforestation) and their environmental impact. Explanation should then be supported with specific examples, such as Nara in Mali and Khushab in Pakistan. The best answers might point out that it is often difficult to separate the importance of human causes from those related to drought and climate change.

Managing rural change

Question 5

a Using evidence from the OS map extract, describe the main characteristics of land use in Figure 2.8.

-  The area mainly lies between 150 and 200 metres above sea level. Settlement is low density and dominated by dispersed farms. There are a number of hamlets, such as Laverton, and two small villages — Galphay and Winksley. The main land use is farming, but there are also significant tracts of woodland — mostly conifer plantations. Lumley Moor reservoir feeds the public water supply. The importance of recreation and tourism is indicated by the two caravan and campsites and by the number of pubs. The map extract covers a pleasant, rolling landscape, which is almost exclusively rural.

Level	Mark	Descriptor
2	3–4 marks	Candidates provide a structured description, with specific reference to map evidence. They use the evidence of the map specifically and refer in detail to at least three types of land use.
1	0–2 marks	Candidates list land uses. There is little structure to descriptions, which are generalised and provide limited specific information.

-  You should structure your answer in terms of types of rural land use, i.e. settlement, farming, woodland, recreation and tourism. Descriptions of land use should refer to:
- settlement — density, distribution and type
 - farmland — distribution and field patterns
 - woodland — extent, type and function
 - recreation and tourism — resources, services and location

Descriptions must be supported by specific evidence from the map.

b Using evidence from Figure 2.8, explain how rural resources can provide opportunities for economic activities in the area.

-  Factors that support farming include a moderate altitude (150–200 m), which suggests few temperature and rainfall extremes. Farming is also favoured by the relatively gentle slopes and abundant surface runoff. Reservoirs for water supply have been created by damming streams. The presence of reservoirs points to impermeable bedrock. Woodland plantations will support timber production. The pleasant rural character of the landscape, with fields, villages, hamlets and farms, the River Laver and a network of footpaths, provides resources for recreation and tourism.

Level	Mark	Descriptor
2	5–6 marks	Candidates identify and develop clearly two or more rural resources that can provide opportunities for economic activities. For the maximum 6 marks, there must be specific evidence from the map.
1	0–4 marks	Candidates identify two resources, but the links between resources and economic activities are poorly developed, or they identify and develop just one resource. One resource well developed can gain 4 marks.

- e The focus of your answer should be the link between resources and economic activities. Study of the map will identify various economic activities (e.g. farming, forestry, water supply, tourism), suggesting ways in which these rely on local rural resources. You should identify three or four uses and then relate them to possible rural resources. For example, because most of the map is covered by fields and farm names appear frequently, it is reasonable to assume that climate, relief and soils favour farming. Specific map evidence to support this assumption (grid references, place names, altitude) should be quoted.

c With reference to one named rural area, examine the factors that have led to the area's decline.

- e Factors will depend on the area chosen, but might include geographical isolation/remoteness, harsh environmental conditions, depopulation (both cause and effect), land degradation, loss of services, and lack of employment opportunities.

Level	Mark	Descriptor
2	5–6 marks	Candidates describe in detail the factors that have led to decline in a named rural area. Descriptions include relevant information specific to the named rural area.
1	0–4 marks	Candidates produce descriptions that are generalised and contain no relevant information specific to the named rural area and/or rural decline. Maximum 2 marks if no rural area is identified.

- e A successful answer needs to focus on a named rural area, and provide information that is specific to the area (i.e. causes of decline, places, statistics etc.). Suitable examples of declining rural regions are Västerbotten in northern Sweden and Nebraska in the USA.

d With reference to one or more rural areas, show how changes in agriculture can affect the natural environment.

- e Changes in agriculture can have both positive and negative effects on the natural environment. In the EU, the de-intensification of farming through schemes such as set-aside and environmental stewardship have been hugely beneficial to wildlife. Other changes, such as the spread of autumn-sown cereals and moorland 'gripping', have had a detrimental impact. In dryland areas (especially in LEDCs) population pressure has led to over-cultivation, which has induced widespread land degradation (e.g. soil erosion, salinisation).

Level	Mark	Descriptor
3	8–9 marks	Candidates describe in detail and demonstrate ways in which agriculture affects the natural environment. Descriptions and explanations include relevant information specific to the named rural area(s). Answers are well structured, with accurate use of grammar, spelling and geographical terminology.
2	5–7 marks	Candidates describe and demonstrate ways in which agriculture affects the natural environment. Descriptions and explanations include limited relevant information specific to the named rural area(s). Answers may have poor structure, with some inaccurate grammar and spelling. There may be some inaccurate use of geographical terminology.
1	0–4 marks	Candidates offer limited descriptions of the ways in which agriculture affects the natural environment. Explanations are largely absent. Answers are generalised and contain little, if any, relevant information specific to the named rural area(s). Communication is basic, with little structure and inaccurate spelling.

- e** The first task is to define the changes in agriculture, and what is meant by ‘natural environment’. Changes might involve farming methods, technology and intensity. The natural environment will cover ecosystems (e.g. soil, water, wildlife etc.) and landscapes.

The relationship between agricultural change and its impact on the natural environment must be emphasised throughout. Changes in MEDCs (e.g. agro-environmental schemes, farm subsidies etc.) and LEDCs (population pressure, over-cultivation, over-grazing etc.) must be supported with detailed examples.

The final paragraph might conclude that agricultural change has brought both advantages and disadvantages for the natural environment. It might comment on the extent to which these changes and their impacts have been deliberate or inadvertent.

Managing urban change

Question 6

a Describe the pattern of urban land use in the city of Chicago in Figure 2.9.

-  The principal land uses are residential and commercial. The CBD (the Loop) occupies the centre of the built area. Housing zones of variable density extend outwards in all directions from the CBD. Lower density housing (e.g. single-family dwellings) is more prominent in the outer suburbs. Slums are found adjacent to the CBD. Residential areas are also differentiated along ethnic lines; Chinese, Italian and black ghettos are found in the zone of transition and the working-class zone.

Level	Mark	Descriptor
2	3–4 marks	Candidates describe the urban land use pattern in detail. Descriptions refer to a number of land uses (including density and ethnic composition) within the context of urban structure.
1	0–2 marks	Candidates produce highly generalised descriptions, which fail to connect with urban structure patterns.

-  You should try to describe urban land use within the context of urban structure models. This means thinking in terms of land use organised around the CBD in zones, sectors and areas. Land use in Chicago is not distributed randomly, so your description should recognise elements of structure and order. Refer to specific types of land use and their characteristics, but don't be tempted to explain the patterns you describe.

b With reference to Figure 2.9, suggest two factors that may have influenced the spatial pattern of land use in Chicago.

-  Factors influencing land use include:
- the growth of the city outwards from its centre in all directions
 - the lake to the east
 - in-migration (Chinese, Italians, black people and Germans) settling close to the centre in zones II and III

Level	Mark	Descriptor
2	5–6 marks	Candidates identify and develop clearly two factors that influence land use. For 6 marks, at least one of the factors must include specific evidence from Figure 2.9.
1	0–4 marks	Candidates either identify two factors, but their development is limited, or they identify and develop one factor only. One factor well developed can gain up to 4 marks.

- e Urban land use patterns are influenced by a range of factors, including a city's outward growth from its historic core, accessibility along major transport routes, the relief and drainage of the site, planning controls, segregation of social and economic groups, and air pollution etc. Your answer to this question should refer to specific examples of land use in Figure 2.9. Generalised answers that could apply to any city will not achieve more than Level 1. Once a factor has been identified, it must be developed. For example, the location of ethnic minority groups near the centre is probably linked to cheap rented accommodation (e.g. slums).

c With reference to one named urban area, describe the main features of multiple deprivation.

- e Poverty is associated with a number of social and economic dysfunctions, which together add up to multiple deprivation. Multiple deprivation is often found in the inner city, outer peripheral estates and squatter settlements. Among the features of multiple deprivation are poverty, low wages, unemployment, poor access to services, ill health, low skills and low educational attainment.

Level	Mark	Descriptor
2	5–6 marks	Candidates describe in detail the features of multiple deprivation in a named urban area. Descriptions include information relevant to the named urban area.
1	0–4 marks	Candidates produce descriptions that are generalised and contain little relevant information specific to the named urban area.

- e At the outset a definition of multiple deprivation is needed. A successful answer must be based on a specific named urban area. The urban area could be in an MEDC (e.g. Leeds) or an LEDC (e.g. Nairobi). At least three aspects of multiple deprivation should be described, such as poverty, unemployment, poor sanitation, poor services or criminality. In the context of Leeds, multiple deprivation could be described in the inner city (e.g. Harehills) and/or on an outer peripheral estate (e.g. Seacroft). In Nairobi, multiple deprivation occurs on a huge scale at Kibera, one of the world's biggest slums. Specific detail may include statistics, names of places and problems unique to the area.

d With reference to one or more named urban areas, explain why multiple deprivation is often concentrated geographically in specific neighbourhoods in cities.

- e Multiple deprivation within urban areas in MEDCs is associated with the distribution of cheap, low-quality housing. People suffering multiple deprivation have few options in the housing market. The result is geographical clustering of low-income groups, who suffer multiple social and economic problems in poor-quality housing areas. In LEDCs, poverty forces millions of urban dwellers to become squatters and build their own homes. Informal settlements often lack basic services, such as piped water, sanitation, roads and schools, and may be at risk from environmental hazards.

Level	Mark	Descriptor
3	8–9 marks	Candidates explain in detail why multiple deprivation is concentrated geographically in cities. Explanations include relevant information specific to named urban areas. The answer is well structured, with accurate use of grammar and spelling. Geographical terminology is used appropriately.
2	5–7 marks	Candidates explain why multiple deprivation is concentrated geographically in cities. Explanations include limited relevant information specific to named urban areas. Answers may have poor structure, with some inaccurate spelling and inaccurate use of terminology.
1	0–4 marks	Candidates offer limited explanations of the geographical concentration of multiple deprivation. Explanations contain little, if any, relevant information specific to named urban areas. Communication is basic, with little structure and inaccurate spelling.

- e** The simplest approach is to explain the geographical concentration of multiple deprivation within the context of one or more named urban areas. This ensures that answers are firmly rooted in specific examples. In Leeds, multiple deprivation is concentrated in the inner city (e.g. Harehills) and in social housing, often on large peripheral estates (e.g. Seacroft). The housing stock acts as a template that allocates different economic, social and ethnic groups to particular neighbourhoods. The processes causing geographical clustering of multiple deprivation in LEDCs are similar, but more extreme. Desperate poverty means that millions of people cannot afford to rent even the lowest-quality housing — hence the growth of informal or squatter settlements.

The energy issue

Question 7

a Study Figure 2.10, which shows nuclear power production between 1994 and 2006.

i Describe the pattern of nuclear power production in Figure 2.10.



Descriptions might identify:

- the dominance of Europe/Eurasia and North America in nuclear power production
- the growing importance of Asia/Pacific
- the tiny contribution of Africa and South and Central America
- the steady worldwide growth in production since 1994

Level	Mark	Descriptor
2	3–4 marks	Candidates give accurate descriptions of the main changes and refer to the data in Figure 2.10.
1	0–2 marks	Candidates make no specific reference to data in Figure 2.10. Coverage of the main trends is limited and/or inaccurate.



Effective descriptions need to identify the general patterns and trends, and any obvious anomalies that don't follow the trends. The general patterns/trends and anomalies should then be supported with specific data from Figure 2.10. For example, the overall trend is slow but steady growth, with an increase in global nuclear power production from 500 mtoe in 1994 to around 630 mtoe in 2006.

ii Suggest reasons for the pattern of nuclear power production described in (i).



Reasons could include:

- capital costs and sophistication of nuclear technology
- concerns about the safety of nuclear power
- concerns about the long-term storage of spent fuel
- the availability of alternative sources of energy, such as oil to Middle Eastern countries
- the contribution of nuclear energy to reducing carbon dioxide emissions associated with global warming and climate change

Level	Mark	Descriptor
2	5–6 marks	Candidates identify and develop at least two reasons in detail. These are well related by cause and effect, and appropriate to the data/patterns in (i).
1	0–4 marks	Candidates either identify two reasons, but with little emphasis on cause–effect, or identify and develop only one reason.



The question does not specify the number of reasons required to explain changes in nuclear power production. A balance is needed between answers that are too wide ranging (dealing with the reasons superficially) and those that are too narrow (providing only limited explanation). In this case, two or three reasons would give the ideal balance.

b Describe the typical energy mix of countries at the lower end of the development spectrum.

-  Descriptions might start with a definition of ‘energy mix’ and make the distinction between primary and secondary energy. The main features of the energy mix of LEDCs include:
- heavy reliance on biomass fuels, such as firewood and animal residues
 - few energy sources that rely on advanced technology or capital-intensive projects (e.g. nuclear, HEP)
 - electricity generation from fossil fuels, especially coal and oil

More discerning answers might make the point that there is wide variation in energy mixes between individual LEDCs.

Level	Mark	Descriptor
2	5–6 marks	Candidates describe two features in detail with the support of examples. The highest-level answers may point to the wide variation in energy mix found in LEDCs.
1	0–4 marks	Candidates describe one feature in detail or offer limited description of energy mix in LEDCs, with few or no supporting examples.

-  It is important, at the outset, to define briefly the meaning of the term ‘energy mix’. Two or three features of the typical energy mix of LEDCs should be described, supported with examples and, where appropriate, statistics. Exceptions to the typical energy mix of LEDCs should be described. Answers must focus on description throughout, and avoid straying into areas of explanation.

c With reference to one or more named examples, explain how energy supplies can be managed to ensure sustainability.

-  The content will depend largely on the examples chosen. Possible examples include:
- Sweden’s development of its HEP potential to create a low-carbon economy
 - California’s promotion of renewable energy resources, and the state government’s attempts to limit the use of fossil fuels and control vehicle exhaust emissions

Level	Mark	Descriptor
3	8–9 marks	Candidates explain in detail, through the use of a named example (or named examples), a variety of ways in which energy supplies can be managed in a sustainable way. Answers are well structured, with accurate use of grammar, spelling and geographical terminology.
2	5–7 marks	Candidates explain how energy supplies can be managed in a sustainable way. Reference to named examples will be sound but may lack some detail and/or focus. Answers may be poorly structured, with some inaccurate spelling, punctuation and use of geographical terminology.
1	0–4 marks	Candidates offer limited explanations. The approach is often vague, simplistic and generalised, with limited exemplification. Communication is basic, with little structure and inaccurate spelling.

-  The first task is to define ‘sustainability’. The second is to identify one or more named examples, to illustrate how energy resources can be managed sustainably. Efforts to manage energy supplies should be detailed and cover two or three different policies (e.g. investment in renewables, energy saving, discouraging the use of fossil fuels). Examples should be specific to particular regions. Generalised accounts will be limited to Level 1.

The growth of tourism

Question 8

a Study Figure 2.11, which shows the relationship between levels of development and per capita spending on tourism in a selection of countries.

i Describe the relationship between levels of development and per capita spending in Figure 2.11.

 There is a positive (log-normal) relationship between levels of development and per capita spending. The more developed a country is, the greater its per capita spending on tourism. However, despite the trend, the wide scatter of points suggests there are significant anomalies.

Level	Mark	Descriptor
2	3–4 marks	Candidates identify the positive relationship and its direction (i.e. that development influences per capita spending). This might be supported by detailed statistical data from Figure 2.10 or qualified with reference to the wide scatter of points and the imperfect nature of the relationship.
1	0–2 marks	Candidates identify the positive relationship, but there is limited exemplification or appreciation of its direction, or of the variability of the relationship.

e High-quality answers will identify accurately the trend in Figure 2.11, support the trend with specific statistical evidence/data from Figure 2.11 and note any obvious anomalies that run counter to the trend. The log scale on the y-axis has two purposes. First, it transforms the relationship between development and per capita spending so that it approximates a straight line, and second it makes it possible to produce a clear plot of data that have a wide range of values.

ii Suggest reasons for the relationship described in (i).

 Reasons include:

- higher disposable incomes with increasing development
- greater access to modern transport and tourism infrastructures with rising development
- greater awareness of opportunities for travel (advertising, media) with development
- increases in leisure time (holidays) with increasing development

Level	Mark	Descriptor
2	5–6 marks	Candidates identify and develop at least two reasons in detail and these are effectively related (via cause and effect) and appropriate to the data/trends in (i).
1	0–4 marks	Candidates either identify two reasons but with little reference to cause and effect, or they identify and develop only one reason.

e It is important to focus wholly on the relationship described in (i) and to show how it can be explained by two or more reasons. Each reason should be stated briefly and then developed in more detail. For example, where people have high disposable incomes they spend proportionately more on services such as transport and tourism, and proportionately less on basic items such as food and clothing.

b Examine the ways in which tourism can have positive effects on the environment.

 Where the natural environment is an important tourism resource it is vital that it is not degraded. This means that its use must be sustainable. Thus, in order to maintain tourism income, large areas may be protected as national parks and nature reserves (e.g. east Africa, Arches National Park). Tourism also generates the wealth that allows the environment and wildlife to be protected. As tourists become more demanding, and mass tourism is replaced by a more sustainable ecotourism, governments can make strenuous efforts to protect the environment from further development, or mitigate the worst effects of mass tourism and regenerate the built environment (e.g. in southern Spain).

Level	Mark	Descriptor
2	5–6 marks	Candidates identify at least two ways in which tourism has positive effects on the environment, and describe them in detail, with the support of examples or the appropriate use of statistics.
1	0–4 marks	Candidates either describe one way in detail or provide a superficial examination of ways with few, if any, supporting examples. Weaker answers may simply list the impact of tourism and ignore the positive effects.

 It is essential to focus on positive effects only and to describe at least two ways in which tourism can have a positive influence on the environment. Although not specifically asked for, you should include examples of these positive effects. Appropriate reference could be made to conservation in national parks (such as the Lake District and Arches), the rainforest reserve of Mount Liamuiga on St Kitts, and the removal of the legacy of mass tourism (e.g. cheap hotel buildings) in Spain. The idea should be mentioned that ecotourism is most likely to flourish where environmental resources are protected and used in a sustainable way.

c With reference to one or more named examples, explain how issues of sustainability are playing an increasingly important role in the management of tourism.

 Rising demand from tourism and recreation is placing increasing pressure on the environment. Without management to ensure sustainability, many environments and ecosystems will be degraded. Sustainability means considering the needs of the present without compromising the ability of future generations to meet these needs. Tourism often has adverse effects on the environment and local people. Explanations of the increasing role of sustainable management will vary with the example or examples chosen. These examples can relate either to locations or to types of tourism (e.g. mass tourism, ecotourism). The example of the Lake District National Park shows how management aims to resolve issues, such as traffic congestion, water pollution, land use change and footpath erosion. Other examples include the move away from mass tourism on Tenerife and tough regulation of new tourism developments on St Kitts.

Level	Mark	Descriptor
3	8–9 marks	Candidates explain in detail how issues of sustainability are playing an increasing role in tourism management. Explanations are specific to the example(s) chosen — either locational or type of tourism. The answer is well structured, with accurate use of grammar and spelling. Geographical terminology is used appropriately.
2	5–7 marks	Candidates explain how tourism is being managed to make it more sustainable. Reference to named examples is sound and may focus more on tourism types (e.g. ecotourism) than on places. Answers may have poor structure, with some inaccurate spelling and use of terminology.
1	0–4 marks	Candidates offer limited explanations. The answer is vague, simplistic and generalised, with little exemplification or relevance to named example(s).

- e** The answer should start with a definition of sustainability and outline the issues connected to it. The focus throughout will be on the relationship between management and the sustainability goal. A successful answer will be based around detailed examples, either locational or types of tourism. It will show how issues such as environmental degradation have been tackled by management responses, such as creating conservation areas, encouraging ecotourism at the expense of mass tourism, limiting access by private transport and strict development controls.

Section B: extended writing questions

Unit F761

Question 1

With reference to named examples, explain how management might help to resolve conflicts between development and flood risk issues.

-  Development on floodplains is controversial because it increases flood risks. The economic costs of flooding in MEDCs are rising and there are issues of sustainability of developments in flood risk areas. Pressures for development on floodplains are due to high levels of demand and land shortages. Management can include:
- land use control by planning authorities following government guidelines, which can limit floodplain development
 - flood prevention measures, such as hard engineering structures (e.g. levées, dams, relief channels)
 - flood abatement (e.g. land use changes such as afforestation in headwater regions)

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how management can help resolve conflicts between development and flood risk issues. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of how management can help resolve conflicts between development and flood risk issues. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how management can help resolve conflicts between development and flood risk issues. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of how management can help resolve conflicts between development and flood risk issues.
2	3–4 marks	Some analysis of how management can help resolve conflicts between development and flood risk issues.
1	1–2 marks	Limited analysis of how management can help resolve conflicts between development and flood risk issues.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

- e Your introduction should clarify the conflict between development and flood risk issues. It should also list the ways in which management can help to resolve the conflicts (e.g. planning control in vulnerable areas, flood control structures, flood abatement measures). Possible examples might include river basin management on the River Ribble, development control on floodplains in the UK and the Three Gorges Dam.

Conclusions should underline the range of management options available and the need for management, given the pressures for development and the increasing risk of flooding with climate change.

Question 2

With reference to named examples, explain how management is needed to resolve development issues and conflicts in coastal environments.



Possible development issues include:

- urbanisation of coastlines
- the environmental impact of mass tourism/golf tourism etc.
- coastal protection against erosion and flooding

Management may cover local/regional government action to restrict further development and decisions on coastal protection development through Shoreline Management Plans.

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how management can help resolve conflicts between development issues and coastal environments. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of how management can help resolve development issues in coastal environments. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how management can help resolve development issues in coastal environments. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of how management can help resolve development issues in coastal environments, and an effective evaluation of the strategies used.
2	3–4 marks	Some analysis of how management can help resolve development issues in coastal environments. Limited (if any) evaluation.
1	1–2 marks	Limited analysis of how management can help resolve development issues in coastal environments, and no attempt to evaluate strategies used.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

- e The first task is to define the relevant development issues and the possible management responses. Then the answer should concentrate on the development issues and management responses. These should be illustrated by two or three detailed case studies, such as southern Spain, the Yorkshire coast and St Kitts. The requirement for evaluation could be met by arguing that some development issues in Shoreline Management Plans provoke a 'do nothing' strategy for certain stretches of coastline, and that intervention by management in some development issues (e.g. erosion control) may cause more problems than it solves. An effective conclusion would summarise those issues and responses where management plays a key role, but point to exceptions where management can do little to resolve conflicts.

Question 3

With reference to named examples, explain how cold environments can be managed to ensure their sustainability.

-  The sustainable use of cold environments includes designating wilderness areas, reserves, national parks etc. Examples are Cairngorms National Park, the Arctic National Wildlife Refuge and Annapurna Conservation Area. Conservation of environmental resources is given priority in such areas. Management strategies include:
- involving indigenous groups as stakeholders in environmental conservation
 - diverting money from international tourism to conservation projects
 - reducing the environmental footprint of mining and energy extraction

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how management might ensure sustainability. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of how management might ensure sustainability. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how management might ensure sustainability. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of how management might ensure sustainability, and an effective evaluation of the strategies used.
2	3–4 marks	Some analysis of how management might ensure sustainability. Limited (if any) evaluation.
1	1–2 marks	Limited analysis of how management might ensure sustainability, and no attempt to evaluate strategies used.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

-  The term 'sustainability' requires definition. This can be followed by an explanation of management approaches, which include designated conservation areas and conservation measures. It would then be useful to discuss action by governments and businesses to minimise the environmental impact of settlements, infrastructure and economic activities (e.g. oil exploration and production). Good answers will be well grounded in examples, such as Annapurna and the Arctic Wildlife Refuge. There is scope for evaluating the attempts at sustainable development and questioning if activities such as mineral and oil production can ever be sustainable.

Question 4

With reference to named examples, explain how hot arid and semi-arid environments might be managed to ensure sustainability.

 Problems of sustainability relating to land degradation and desertification are caused by agricultural mismanagement and climate change. In extreme cases, land is abandoned.

- Soil erosion can be tackled by afforestation, strip cropping, terracing, shelterbelts etc.
- Salinisation can be reduced by land drainage (and other measures to lower water tables) and water management.
- Overgrazing can be avoided by fencing, reducing livestock densities etc.
- Deforestation can be rectified by reafforestation.

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how management might help to promote sustainable use of hot arid and semi-arid environments. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of how management might help to promote sustainable use of hot arid and semi-arid environments. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how management might help to promote sustainable use of hot arid and semi-arid environments. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of how management might help to promote sustainable use of hot arid and semi-arid environments, and an effective evaluation of the strategies used.
2	3–4 marks	Some analysis of how management might help to promote sustainable use of hot arid and semi-arid environments. Limited (if any) evaluation.
1	1–2 marks	Limited analysis of how management might help to promote sustainable use of hot arid and semi-arid environments, and no attempt to evaluate strategies used.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

- e Answers should begin with a definition of sustainability and a brief review of the causes of symptoms of unsustainable agriculture (e.g. land degradation and desertification). Management responses to specific environmental problems, such as soil erosion and salinisation, should be considered with reference to named examples such as central China (Korqin Sandy Lands) and Pakistan (Khushab). The word 'might' in the essay title gives some scope for evaluation, because management schemes are not always successful and many may be impossible due to the scale of the problem, poverty and geographical isolation (e.g. Nara in Mali).

Unit F762

Question 5

With reference to named examples, describe and explain how planning and management are tackling the economic and social problems of rural areas in MEDCs.

 The economic and social problems of rural areas in MEDCs include:

- service decline
- depopulation
- ageing populations
- growth of second homes
- lack of affordable housing
- limited employment opportunities
- rural deprivation

Planning and management responses from local government, national government and supra-government organisations include:

- improvements in communication (e.g. funding from EU's regional policies)
- development of tourism opportunities
- economic diversification
- key settlement policies
- financial support for rural shops

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how planning and management are tackling the economic and social problems of rural areas. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of how planning and management are tackling the economic and social problems of rural areas. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how planning and management are tackling the economic and social problems of rural areas. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of the economic and social problems of rural areas, and planning and management responses, and effective evaluation of the strategies used.
2	3–4 marks	Some analysis of the economic and social problems of rural areas, and planning and management responses. Limited (if any) evaluation.
1	1–2 marks	Limited analysis of the economic and social problems of rural areas, and planning and management responses.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

- e** Your introduction should define the economic and social problems of rural areas. Planning and management responses should be tackled in the context of specific rural areas. These areas could be stated at the outset. The answer could be structured either around the economic and social problems or, geographically, around specific rural areas. Whichever structure is adopted, you must ensure that the focus is firmly on the link between problems and management. Your conclusion should emphasise:
- that many rural areas suffer from a range of problems
 - that planning and management address these problems in a variety of ways
 - that often there are no simple solutions

Question 6

With reference to named examples, describe and explain attempts by planners to reduce the impact of cities on the physical environment.

 Planning attempts aimed at reducing the impact of cities on the physical environment include:

- controls on air pollution, especially from motor vehicles
- recycling waste and reductions in solid waste going to landfill
- reclamation of derelict land
- tackling traffic congestion
- the development of sustainable cities

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how planners have attempted to reduce the impact of cities on the physical environment. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of how planners have attempted to reduce the impact of cities on the physical environment. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how planners have attempted to reduce the impact of cities on the physical environment. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of the attempts by planners to reduce the impact of cities on the physical environment. Effective evaluation of attempts by planners to reduce the impact of cities on the physical environment.
2	3–4 marks	Some analysis of the attempts by planners to reduce the impact of cities on the physical environment. Limited (if any) evaluation.
1	1–2 marks	Limited analysis of the attempts by planners to reduce the impact of cities on the physical environment.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

 Relevant answers need exemplification from at least two named urban areas. Answers could present detailed case studies of specific urban areas, or could adopt a more generic approach based on types of impact and the planning responses. Your opening paragraph should define the various environmental impacts.

The emphasis in the question is on management. As a result, detailed examples of management responses to environmental problems (e.g. transport plan for Santiago,

land reclamation strategy in the Lower Lea Valley) are essential. References to the causal links between environmental impacts and planning initiatives should be given prominence.

A clear conclusion should provide a brief recap of the examples of urban environmental problems and planning responses in the main body of the answer. More radical responses, such as the sustainable city of Dongtan, could be mentioned as pointing the way to urbanism in the future.

Question 7

With reference to named examples, describe and explain how the development of tourism often requires a careful balance between the economic and social needs of local people, and conservation of the environment.

 The conflict between the economic needs of local people and conservation of the environment is at the heart of this question. Local people gain economic benefits from tourism, such as employment (both direct and indirect), improvements in infrastructure (e.g. water supply, roads, sanitation, airports) and protection of the environment. At the same time, conservation of the environment may disrupt local societies — for example, the protection of forest resources and removal of domestic livestock from conservation areas. In areas of mass tourism, local people may oppose developments that make tourism more sustainable but threaten employment, such as restricting the speed limits of power boats on Windermere and the move from mass tourism on Tenerife.

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how the development of tourism requires a balance between the needs of local people and conservation of the environment. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of the development of tourism requires a balance between the needs of local people and conservation of the environment. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how the development of tourism requires a balance between the needs of local people and conservation of the environment. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of the issue of the economic and social needs of local people and environmental conservation. Effective evaluation of the balance between socioeconomic and environmental needs.
2	3–4 marks	Some analysis of the issue of the economic and social needs of local people and environmental conservation. Limited (if any) evaluation.
1	1–2 marks	Limited analysis of the issue of the economic and social needs of local people and environmental conservation.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

- e You should note that there are two command words in the question — ‘describe’ and ‘explain’ — and these should be given equal weight. A short introduction will define what you understand by the ‘economic and social needs’ of local people (e.g. employment, income, services). It should make the point that conservation may conflict with the economic and social needs of local people.

The bulk of the answer will develop the theme of conflict and management and, using named examples, show how issues can arise. Ideally you should devote a paragraph to each issue, supported by examples. For example, conservation areas established in India for the protection of endangered tigers and leopards may conflict with the needs of livestock herders on adjacent farmland. Another example is the move away from mass tourism in Tenerife and southern Spain, which threatens the livelihoods of hoteliers and thousands of local people, who benefit either directly or indirectly from mass tourism. For each issue, the management response should be described and you should explain how it represents a balance between conflicting interests. In some exceptional cases, this balance may not be achieved, often with disastrous consequences.

The conclusion will reassert that the development of tourism requires a careful balance between the needs of local people and conservation. Reference should be made briefly to examples in the body of the answer that demonstrate this. If exceptions have been described, they should be instructive in showing what happens when the balance fails.

Question 8

With reference to named examples, explain how the development of energy resources creates both opportunities and problems for people and society.



The development of energy resources brings socioeconomic benefits, such as:

- electricity supplies for industry and domestic use
- employment
- improvements in transport infrastructure
- foreign direct investment
- a reduction in energy imports

Problems with the development of energy resources include:

- the displacement of people through dam building
- conflict with indigenous cultures and people
- air pollution
- oil spillages
- storage of nuclear waste

These opportunities and difficulties can be illustrated with examples such as the Three Gorges Dam, the oil industry in Alaska, oil in the Niger Delta, and India's coal industry.

AO1 Knowledge and understanding

Level	Mark	Descriptor
3	11–13 marks	Detailed knowledge and understanding of how the development of energy resources creates opportunities and problems for people and society. Cause and effect are well understood, and there is effective use of detailed examples.
2	7–10 marks	Some knowledge and understanding of how the development of energy resources creates opportunities and problems for people and society. Cause and effect are understood and some examples are given.
1	1–6 marks	Limited knowledge and understanding of how the development of energy resources creates opportunities and problems for people and society. Cause and effect are not well understood and there is limited use of examples.

AO2 Analysis and application

Level	Mark	Descriptor
3	5 marks	Clear analysis of the opportunities and problems for people and society caused by the development of energy resources. Effective evaluation of the opportunities and problems for people and society.
2	3–4 marks	Some analysis of the opportunities and problems for people and society caused by the development of energy resources. Limited (if any) evaluation.
1	1–2 marks	Limited analysis of the opportunities and problems for people and society caused by the development of energy resources.

AO3 Skills and communication

Level	Mark	Descriptor
3	6–7 marks	Answer is well structured, with effective use of grammar and spelling. Geographical terminology is used accurately. There is a clear conclusion.
2	4–5 marks	Answer may have poor structure, with some inaccurate spelling and inaccurate use of geographical terminology. There is a limited conclusion.
1	1–3 marks	Communication is basic, with little structure and inaccurate spelling. There is no attempt at a conclusion.

- e A well-structured answer will include an introduction that lists the opportunities and problems associated with the development of energy resources. This will indicate in broad terms the essay's content. Opportunities will be defined in social and economic terms; problems will include a number of social, economic and environmental issues.

Answers should aim for balanced coverage of opportunities and problems. This could be done either by dealing with each separately and illustrating where appropriate with named examples, or by focusing on geographical examples and explaining opportunities and problems within the context of specific countries and regions. Examples should include place-specific details and, where possible, supporting statistics. Textbook examples that provide suitable exemplification are China's Three Gorges Dam and oil in the Niger Delta.

An effective answer will include a conclusion. In this instance, the conclusion should comprise a brief summary of the main points in the essay, emphasising that energy resource development inevitably creates disadvantages as well as advantages for people and society.