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General Certificate of Secondary Education
June 2003



GEOGRAPHY (SPECIFICATION A)
FOUNDATION TIER

3031/1F

Paper 1

Monday 2 June 2003 9.00 am to 10.45 am

F

In addition to this paper you will require:

- the Ordnance Survey map;
- the coloured insert.

You may use your calculator.

The map extract (showing the Perth region from Landranger 58), the insert and several of the figures are not reproduced in this question paper due to third-party copyright constraints. The full copy of this paper can be obtained by ordering 3031/1F from AQA Publications - Tel: 0161 953 1170.

Time allowed: 1 hour 45 minutes

Instructions

- Use blue or black ink for written answers. You may use pencil for maps, diagrams and graphs.
- Fill in the boxes at the top of this page.

SECTION A – SKILLS

Answer **ALL** questions

SECTION B – People and the Natural Environment

Answer **THREE** questions only

- Do all rough work in this booklet. Cross through any work you do not want marked.
- If you need extra paper use the Supplementary Answer Sheets.

Information

- The maximum mark for this paper is 70.
- Mark allocations are shown in brackets.
- You will be assessed on your ability to:
 - present relevant information in a form and style that suits its purpose;
 - ensure that text is legible and that spelling, punctuation and grammar are accurate;
 - use specialist vocabulary where appropriate.
- LEDC is a Less Economically Developed Country.
- MEDC is a More Economically Developed Country.

For Examiner's Use			
Number	Mark	Number	Mark
1			
2			
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4			
5			
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7			
8			
9			
10			
Total (Column 1)	→		
Total (Column 2)	→		
TOTAL			
Examiner's Initials			

SECTION A

Answer **ALL** questions in Section A

1

Figure 1 is not included due to third-party copyright constraints.

Total for this question: 14 marks

(a) Study **Figure 1**, the Ordnance Survey map extract of Perth in Scotland.

(i) Give the **four figure** grid reference for the bus and coach station in Perth.

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(2 marks)

(ii) Name the two identical symbols found at 102210 and 103210.

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(1 mark)

(iii) Why was this location chosen for the features named in (ii)?

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(2 marks)

(b) What is the general direction of flow of the River Earn, named in grid square 1518?

Tick **one** box.

East to West

North East to South West

West to East

(1 mark)

(c) Give the length of Mugdrum island, named in grid square 2218.

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(2 marks)

(d) Choose **two** of the following statements that best describe the relief (height and shape of the land) in grid square 1821.

Tick **two** boxes.

The land rises from 10 to 105 metres above sea level.

The land rises steeply from north to south.

The land is gently sloping in the south of the grid square.

The land is mostly over 100 metres above sea level.

(2 marks)

(e) Describe the pattern of roads on the map extract.

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(4 marks)

14

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

2

Total for this question: 6 marks

Study **Figure 2**, a sketch map of part of the Ordnance Survey map extract.

It is drawn at the same scale as the Ordnance Survey map extract.

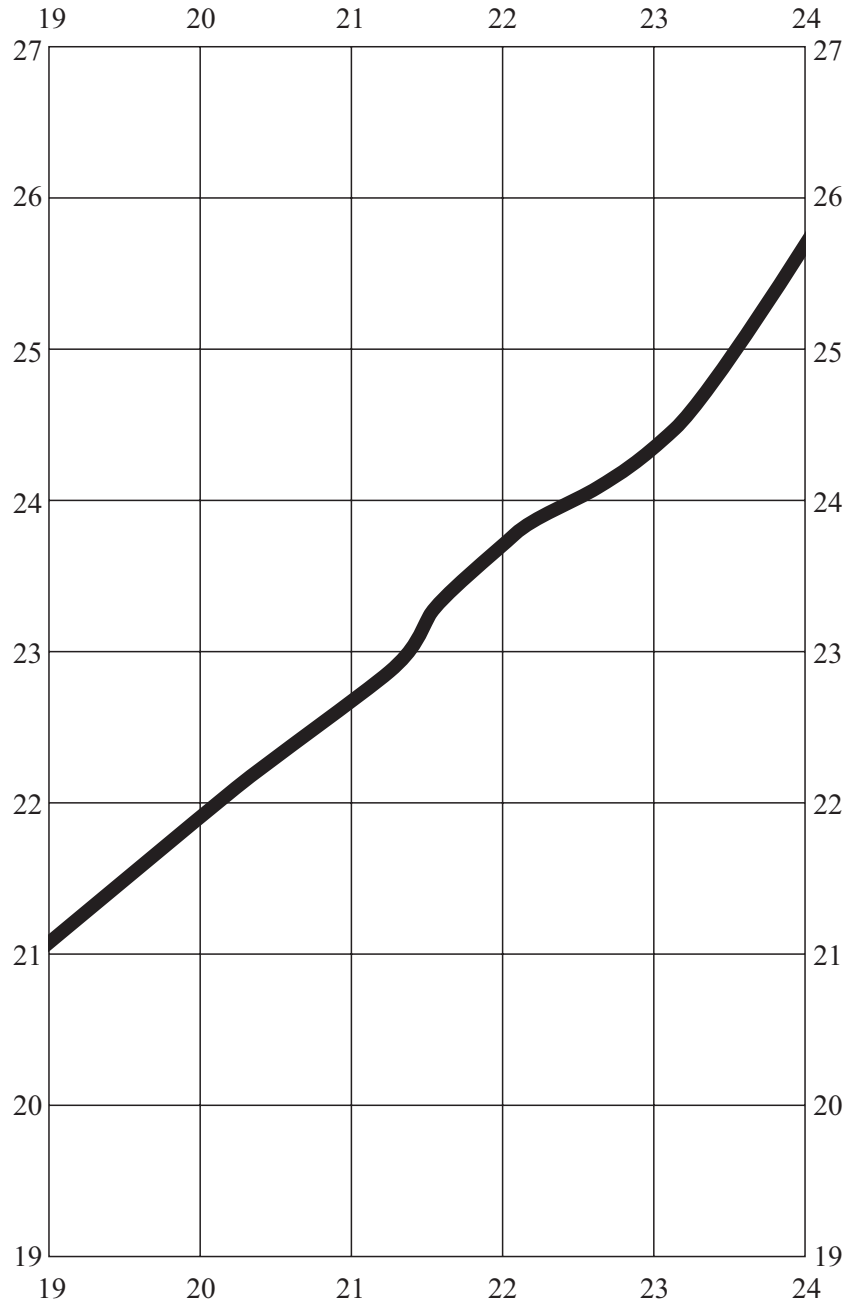


Figure 2

- (a) Using **Figure 1**, the Ordnance Survey map extract, complete the following on **Figure 2**.
- (i) Label the A90(T).
 - (ii) Draw and label the north bank of the River Tay.
 - (iii) Shade in and label **one** grid square where the land reaches over 250 metres above sea level.

(4 marks)

(b) Suggest **two** reasons why there is so little settlement in the area shown on **Figure 2**.

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2.

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(2 marks)

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6

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

3

Total for this question: 5 marks

Study **Figure 3**, on the insert, a world map showing car ownership.

Figure 3 is not included due to
third-party copyright constraints.

(a) How is car ownership measured in the different countries?

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(1 mark)

(b) Describe the pattern of car ownership shown on the map.

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(4 marks)

END OF SECTION A

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5

SECTION B

Answer **THREE** questions only.

4 Tectonic Activity

Total for this question: **15 marks**

Figure 4 shows some information about earthquakes.

Strength of earthquake on the Richter Scale	Example	Death toll	Description	Average number of earthquakes per year
0 - 1.9			Minor	700,000
2 - 2.9			Minor	300,000
3 - 3.9			Minor	40,000
4 - 4.9			Light	6,200
5 - 5.9	1960, Morocco	14,000	Moderate	800
6 - 6.9	1988, Armenia	25,000	Strong	120
7 - 7.9	1995, Japan	5,500	Major	18
8 - 8.9	1964, Alaska	131	Great	1 every 10-20 years

Figure 4

- (a) (i) **Figure 4** shows that the earthquake in Japan in 1995 measured between 7 and 7.9 on the Richter Scale.

How should it be described?

Tick **one** box.Strong Major Great *(1 mark)*

- (ii) What happens to the number of earthquakes per year as the strength increases?

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(1 mark)

(iii) Using **Figure 4**, give the location of the earthquake that caused the least loss of life.

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(1 mark)

(iv) Using **Figure 4**, what was the strength of the earthquake that caused the greatest loss of life?

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(1 mark)

(v) Why do some earthquakes cause more deaths than others?

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(3 marks)

QUESTION 4 CONTINUES ON THE NEXT PAGE

Turn over ▶

- (b) Study **Figure 5**, which shows a cross section through Mount Vesuvius, a composite volcano.

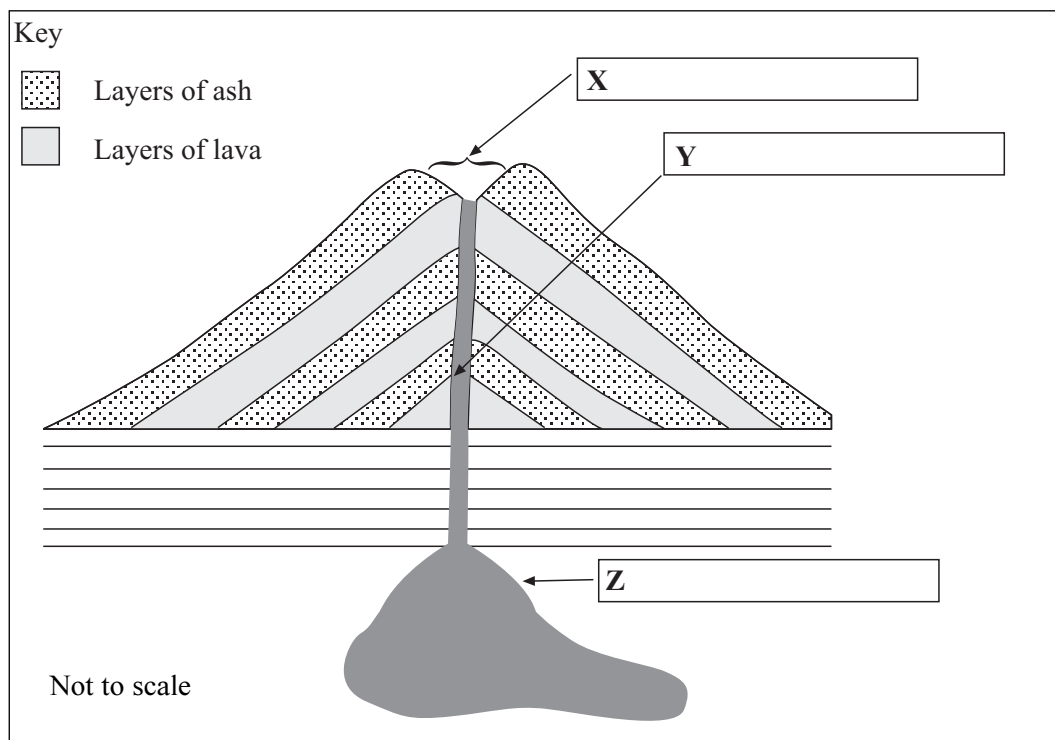


Figure 5

- (i) On **Figure 5**, label features **X**, **Y** and **Z**. (3 marks)

- (ii) Tick the correct box below to show the type of plate boundary where a composite volcano is formed.

Tensional boundary

Compressional boundary

(1 mark)

(iii) Using **one or more** examples of a volcanic eruption, describe the effects on the environment and people.

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(4 marks)

15

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

5 Rocks and Landscapes

Total for this question: 15 marks

(a) Study **Figure 6**, which shows information about a planned quarry near Consett in County Durham.

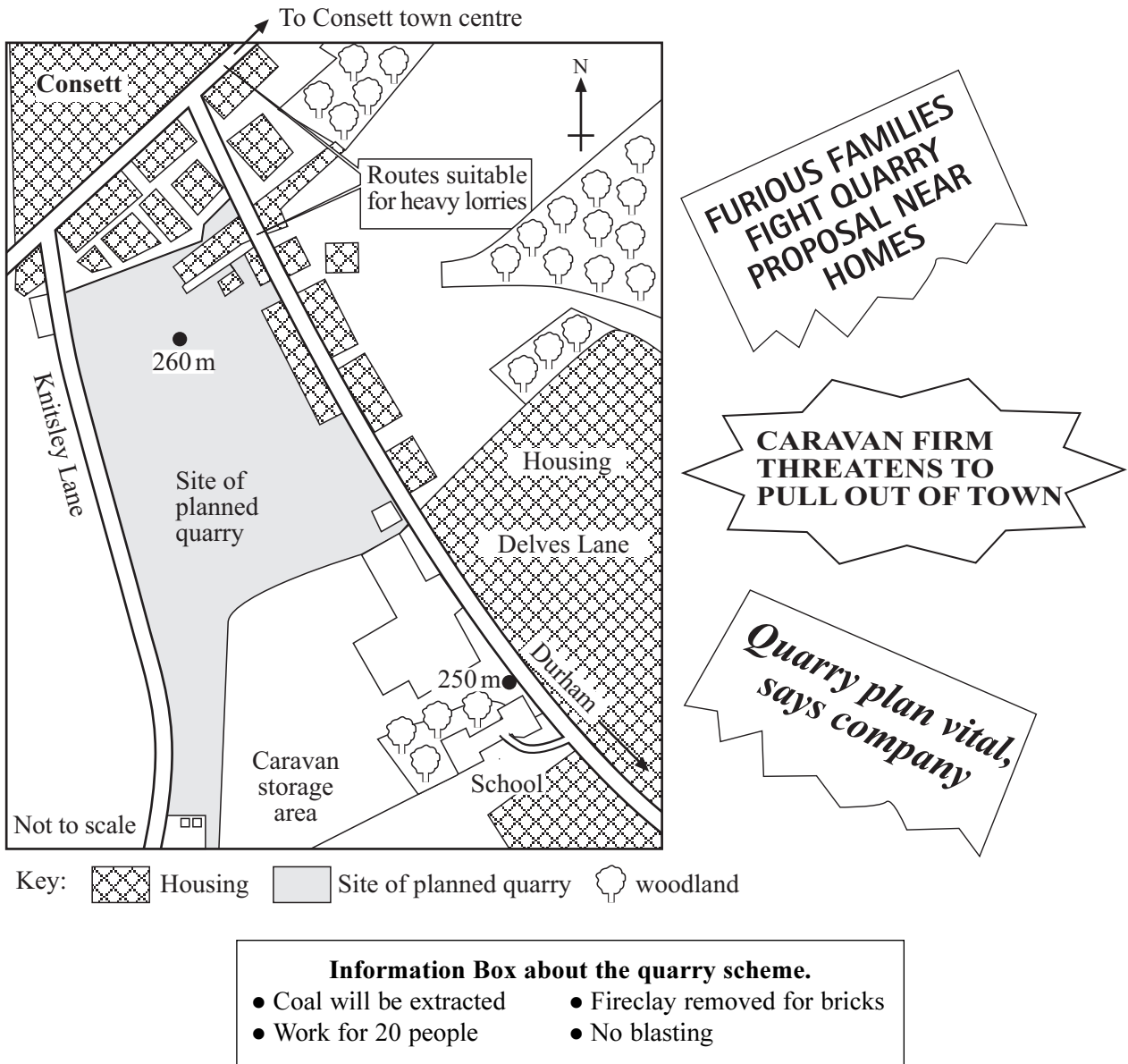


Figure 6

(i) Give **two** features of the scheme planned by the mining company.

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(2 marks)

(ii) Suggest **two** reasons why the local residents and caravan company are against the development.

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(2 marks)

(iii) Describe how quarries may be used once the rocks have been removed.

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(3 marks)

(b) Study **Figures 7a** and **7b**, on the insert, photographs taken in limestone areas.

(i) Tick **two** landforms in the list below that can be seen in **Figure 7a**.

Stalactite

Gorge

Cave

Pothole

Figure 7 is not included due to third-party copyright constraints.

(2 marks)

Turn over ▶

(ii) Describe the limestone features shown in **Figure 7b**.

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(2 marks)

(iii) The landforms in **Figures 7a** and **7b** are formed by limestone solution.
Describe the process of limestone solution.

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(4 marks)

6 River Landscapes and Processes**Total for this question: 15 marks**

(a) Study **Figure 8**, on the insert, a photograph of a waterfall in the Yorkshire Dales.

(i) In the box below, draw a sketch of the waterfall shown in **Figure 8**.

Figure 8 is not included due to third-party copyright constraints.



(2 marks)

(ii) On your sketch, label the:

waterfall
plunge pool
hard (cap) rock.

(3 marks)

Turn over ►

(iii) Complete the paragraph below to explain how a waterfall and gorge are formed.

Choose the correct words from the list:

- | | | |
|--------------------|-----------------|------------------------|
| plunge pool | advance | hydraulic power |
| retreat | traction | meander |

Waterfalls are formed where a river flows over a band of hard rock next to a softer rock. The softer rock is eroded by..... and corrasion. The power of the water creates a deep below the waterfall and undercuts the softer rock until the waterfall eventually collapses. This causes the waterfall to upstream forming a gorge.

(3 marks)

Figure 1 is not included due to
third-party copyright constraints.

(b) Study **Figure 1**, the Ordnance Survey map extract.

Describe the features of the River Earn (named in grid square 1518).

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(3 marks)

QUESTION 6 CONTINUES ON THE NEXT PAGE

(c) Using an example of a flood in an MEDC, describe its effects on the land and people.

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(4 marks)

15

7 Glacial Landscapes and Processes**Total for this question: 15 marks**

- (a) Study **Figure 9**, on the insert, which shows a corrie on Helvellyn in the Lake District.
- (i) In the box below, draw a sketch of the corrie shown in **Figure 9**.

Figure 9 is not included due to third-party copyright constraints.

(2 marks)

- (ii) On your sketch, label the:

steep backwall
corrie tarn (lake)
lip.

(3 marks)

- (iii) Complete the following paragraph to explain the formation of a corrie:

Choose from the following words.

freeze thaw**hollow****plucking****tarn****arête****ribbon lake**

Ice collects in a high up on the hillside. Eventually the ice bulges and begins to flow. The ice erodes the corrie through and abrasion making it deeper and creating a steep backwall. When the ice melts a small may form.

(3 marks)

(b) Study **Figure 10**, which shows how an upland glaciated area may be used to develop tourism.

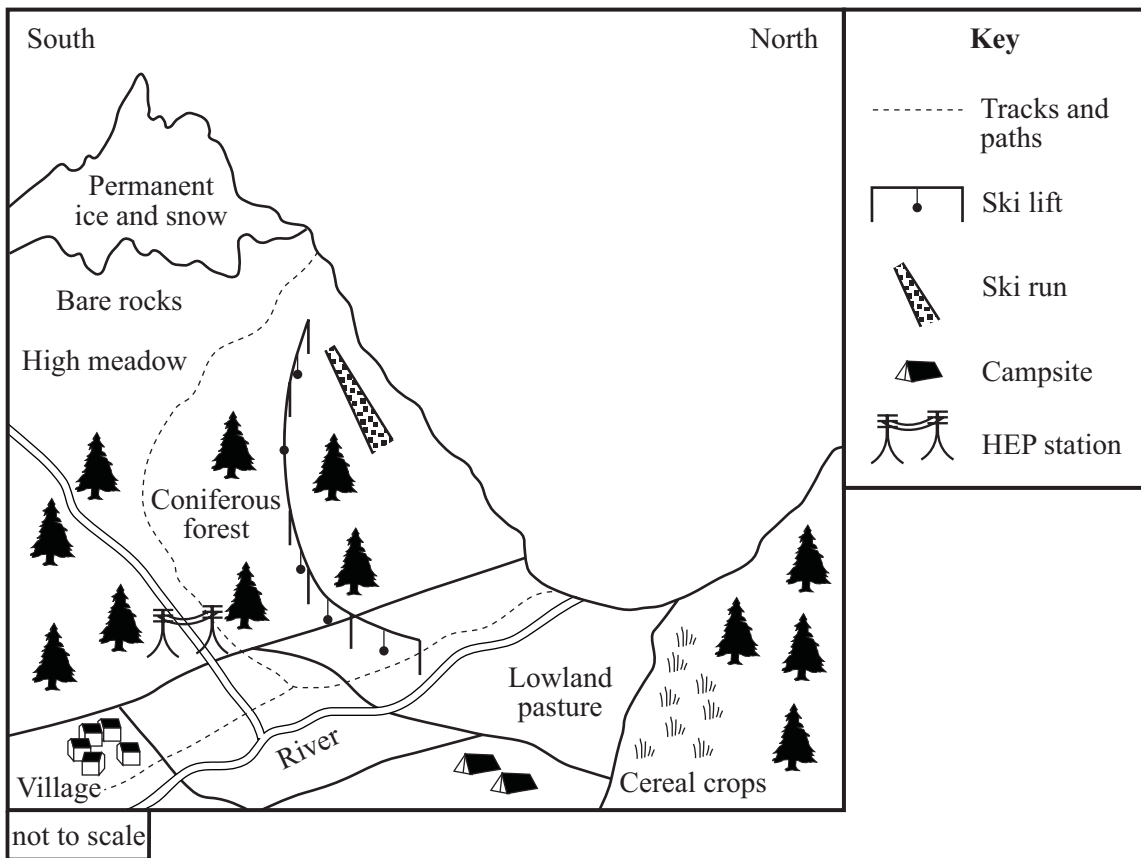


Figure 10

(i) Using **Figure 10**, describe the different uses of upland glaciated areas.

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(3 marks)

QUESTION 7 CONTINUES OVER THE PAGE

Turn over ▶

(ii) Describe how tourist developments in glaciated areas may have an impact on the environment and the local people.

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(4 marks)

15

8 Coastal Landscapes and Processes

Total for this question: 15 marks

- (a) Study **Figure 11**, which shows a stretch of coastline at Kingsdown in East Anglia.

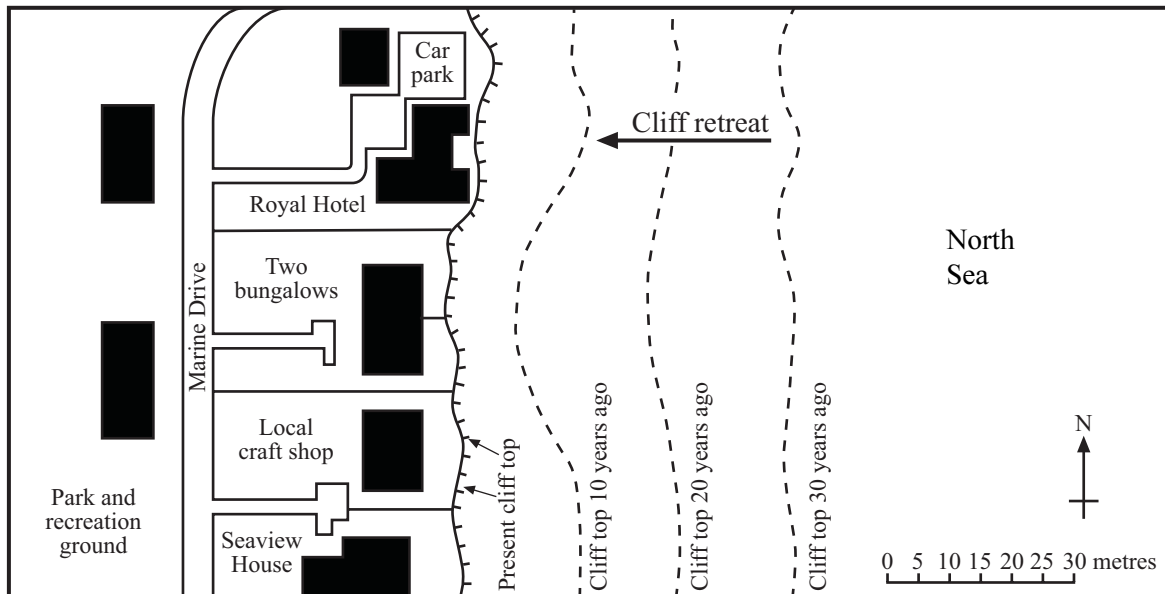


Figure 11

- (i) Which building is most in danger of falling into the sea?

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(1 mark)

- (ii) Use the scale on the map to work out how far the cliff has eroded in the last 30 years.

Give your answer in metres.

..... metres
(1 mark)

QUESTION 8 CONTINUES ON THE NEXT PAGE

Turn over ►

(iii) Complete the following paragraph to explain how cliff collapse occurs.

Choose from this list of words:

- | | | |
|--------------------|------------------------|-------------------------|
| soft | constructive | hydraulic action |
| destructive | longshore drift | hard |

The cliffs of Kingsdown are made of clay which is a rock.
The clay is attacked by waves which erode the clay by
..... and corrasion causing undercutting and collapse. As the
cliffs collapse so the coastline retreats.

(3 marks)

(iv) Describe ways in which erosion could be prevented at Kingsdown in the future.

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(3 marks)

- (b) Study **Figure 12** which shows the coastline near Christchurch Bay in Dorset.

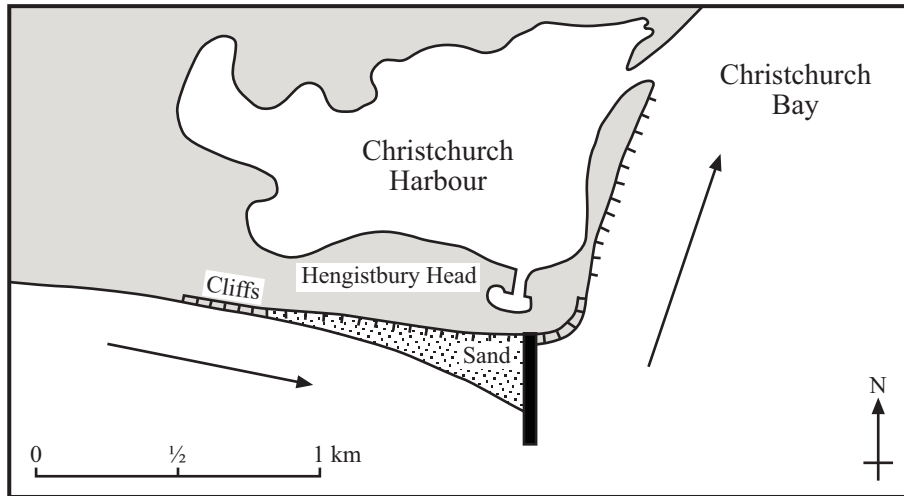


Figure 12

- (i) On **Figure 12**, add the following labels in the correct place:

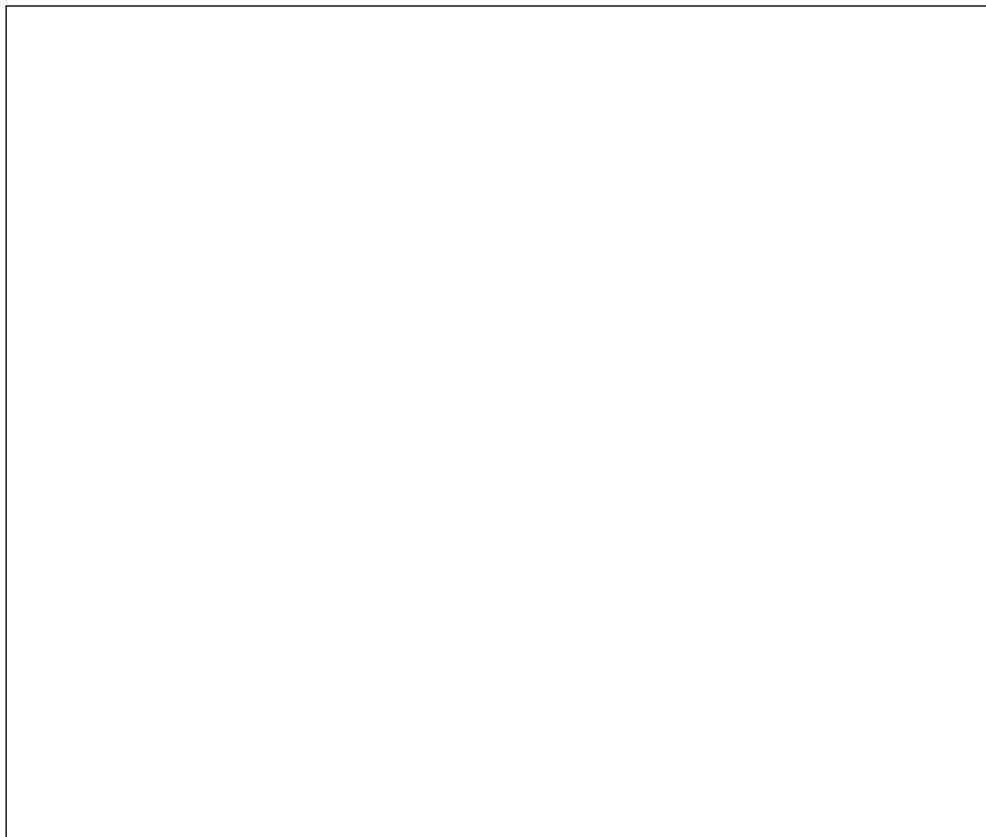
beach

spit

direction of longshore drift.

(3 marks)

- (ii) Draw a labelled diagram in the box below to explain the process of longshore drift.



(4 marks)

9 Weather and Climate

Total for this question: 15 marks

- (a) **Figure 13** shows a cross-section through a depression.

Figure 13 is not reproduced here due to third-party copyright constraints.

□

- (i) On **Figure 13**, label the:

warm front
cold front
warm sector.

(3 marks)

- (ii) Use **Figure 13** to complete the following sentences about a depression.

The first sign of depression is highcloud. The cloud gradually gets thicker and lower until a long period of rain occurs. As the front passes, the rain stops and temperatures rise. The second front brings rain showers from tall cumulonimbus clouds. These clouds may reach metres high.

(4 marks)

- (iii) Which of the following statements is **true**?

Tick **one** box only.

Pressure rises towards the centre of a depression.

There is low pressure at the centre of a depression.

(1 mark)

(b) Study **Figure 14**, showing information about a tropical storm in Cuba.

Figure 14 is not reproduced here due to third-party copyright constraints.

□

(i) Using **Figure 14**, describe the strength and path of Hurricane Michelle.

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(3 marks)

QUESTION 9 CONTINUES ON THE NEXT PAGE

Turn over ▶

(ii) Using an example of a tropical storm, describe its impact on the environment and people.

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(4 marks)

15

10 Ecosystems

Total for this question: 15 marks

(a) Study **Figure 1**, the Ordnance Survey map extract of Perth.

Figure 1 is not included due to third-party copyright constraints.

(i) Study the distribution of coniferous woodland on the Ordnance Survey map extract.

Tick the boxes to show whether the following statements are **true** or **false**.

	True	False
The coniferous woodland is mostly found on sloping land.	<input type="checkbox"/>	<input type="checkbox"/>
The coniferous woodland is found only in the flattest areas of land.	<input type="checkbox"/>	<input type="checkbox"/>
The coniferous woodland tends to avoid the very steep slopes in the north east of the map extract.	<input type="checkbox"/>	<input type="checkbox"/>

(3 marks)

(ii) Describe how conifers are adapted to survive in a cold climate with strong winds.

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(3 marks)

QUESTION 10 CONTINUES ON THE NEXT PAGE

Turn over ▶

(b) Study **Figure 15**, a flow chart showing the causes of desertification.

Figure 15 is not reproduced here due to third-party copyright constraints.

(i) Insert the following statements into the correct boxes in **Figure 15**:

- overgrazing
- more people
- vegetation destroyed.

(2 marks)

(ii) What is desertification?

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(1 mark)

(iii) Using **Figure 15**, explain how increasing numbers of livestock may cause desertification.

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(2 marks)

(iv) Describe how desertification can be prevented or reduced.

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(4 marks)

15

END OF QUESTIONS

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- Question 4 Figure 4: Ted Smart: Save Earth
- Question 5 Figure 6: Stanley Thornes Ltd: Ann Bowen: Geo Active

- Question 8 Figure 12: Macdoland: Neil Punnett: People in the Physical Landscape