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Other Names										
Candidate Signature										



General Certificate of Education
Advanced Subsidiary Examination
January 2011

Geography

GEOG1

Unit 1 Physical and Human Geography

Friday 14 January 2011 9.00 am to 11.00 am

For this paper you must have:

- a pencil
- a rubber
- a ruler

You may use a calculator.

Time allowed

- 2 hours

Instructions

- Use black ink or black ball-point pen. Use pencil only for drawing.
- Fill in the boxes at the top of this page.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Answer four questions.
- Answer Question 1 and **one other** question from **Section A** and Question 5 and **one other** question from **Section B**.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The maximum mark for this paper is 120.
- Each question is worth 30 marks.
- The marks for questions are shown in brackets.
- You are expected to use a calculator where appropriate.
- You will be marked on your ability to:
 - use good English
 - organise information clearly
 - use specialist vocabulary where appropriate.

Advice

- Where appropriate, sketch maps and diagrams should be used to illustrate answers and reference made to examples and case studies.
- You are advised to spend about 60 minutes on Section A and about 60 minutes on Section B.

For Examiner's Use	
Examiner's Initials	
Question	Mark
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TOTAL	



J A N 1 1 G E O G 1 0 1

Section A

Answer **Question 1** and **one other** question from this section.

1 RIVERS, FLOODS AND MANAGEMENT

1 (a) (i) What is meant by the term 'magnitude' of a flood?

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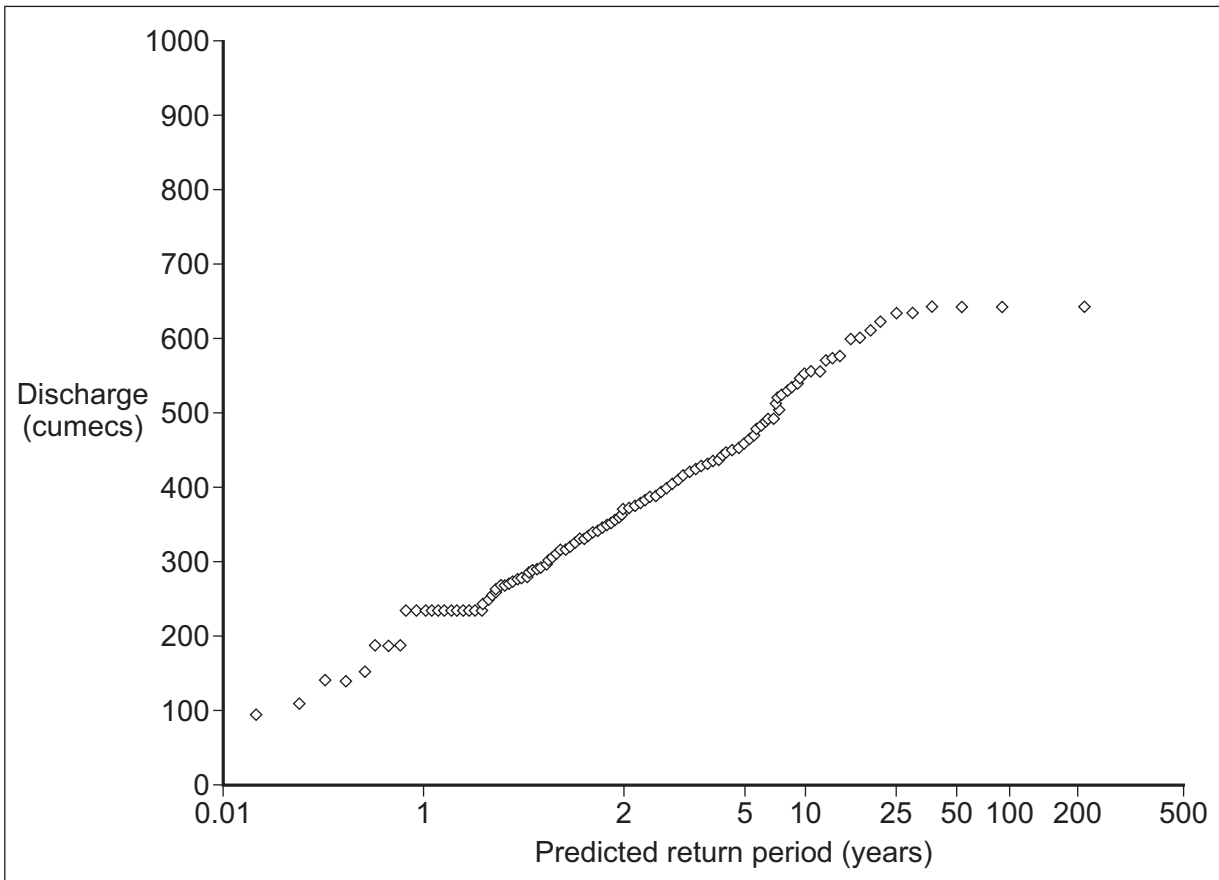
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1 (a) (ii) Study **Figure 1** which shows the predicted return period of flood events for the River Ouse at York.

Figure 1



Summarise the information shown in **Figure 1**.

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(3 marks)

Question 1 continues on the next page

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1 (b) Study **Figure 2** which shows part of the Cuckmere River in East Sussex.

Figure 2



1 (b) (i) Describe the landforms shown in **Figure 2**.

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1 (b) (ii) Flooding is important in the formation of some river landforms.
With the help of **Figure 2**, describe the role of flooding in the formation of river
landforms.

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1 (c)

Channel characteristics such as cross profile, wetted perimeter, hydraulic radius, roughness and efficiency change downstream.

Describe and explain how channel characteristics change downstream.

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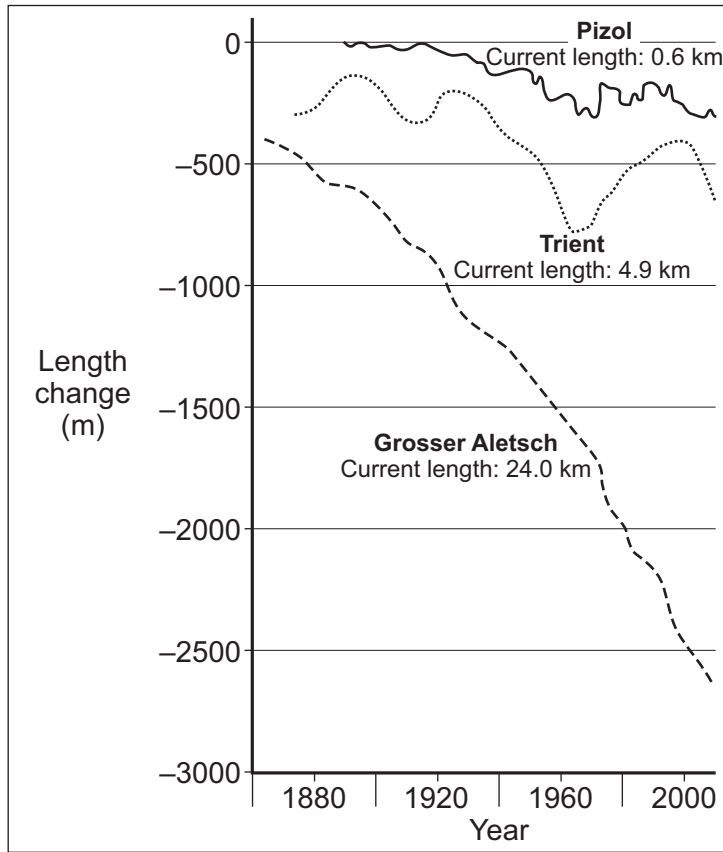
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2 COLD ENVIRONMENTS

2 (a) Study Figure 3 which shows the changing lengths of three glaciers in the Alps.

Figure 3



2 (a) (i) Describe the trends shown in Figure 3.

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2 (a) (ii) Suggest reasons for the trends shown in **Figure 3**.

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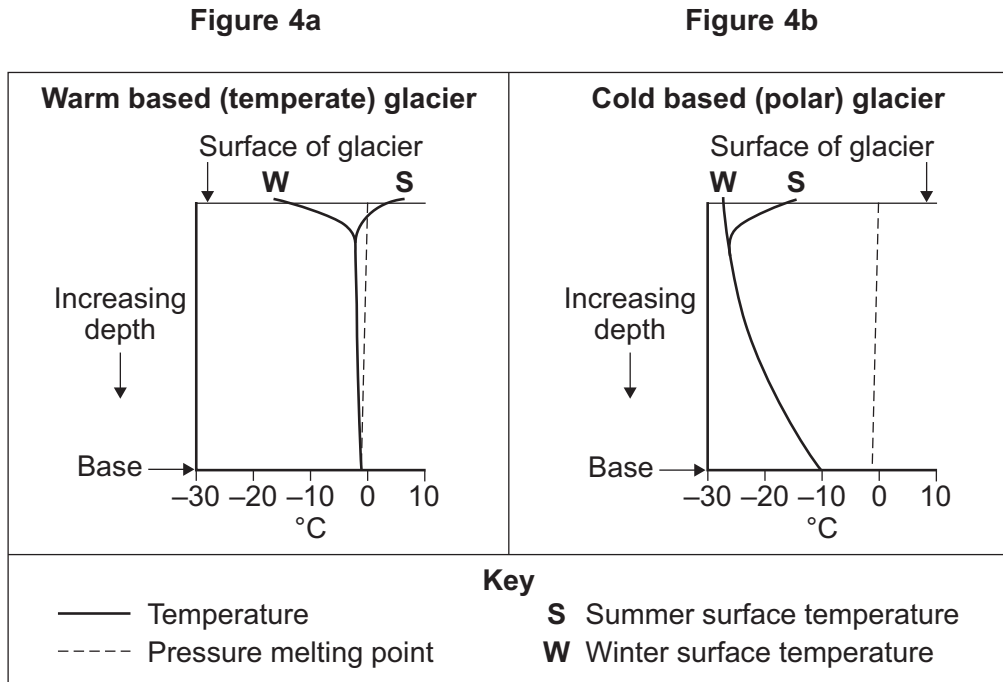
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2 (b) Study **Figures 4a** and **4b** which show how temperature changes with depth in a warm based glacier and a cold based glacier.



2 (b) (i) With reference to **Figures 4a** and **4b**, distinguish between warm based and cold based glaciers.

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2 (b) (ii) With the help of **Figures 4a** and **4b**, explain how ice moves by basal sliding.

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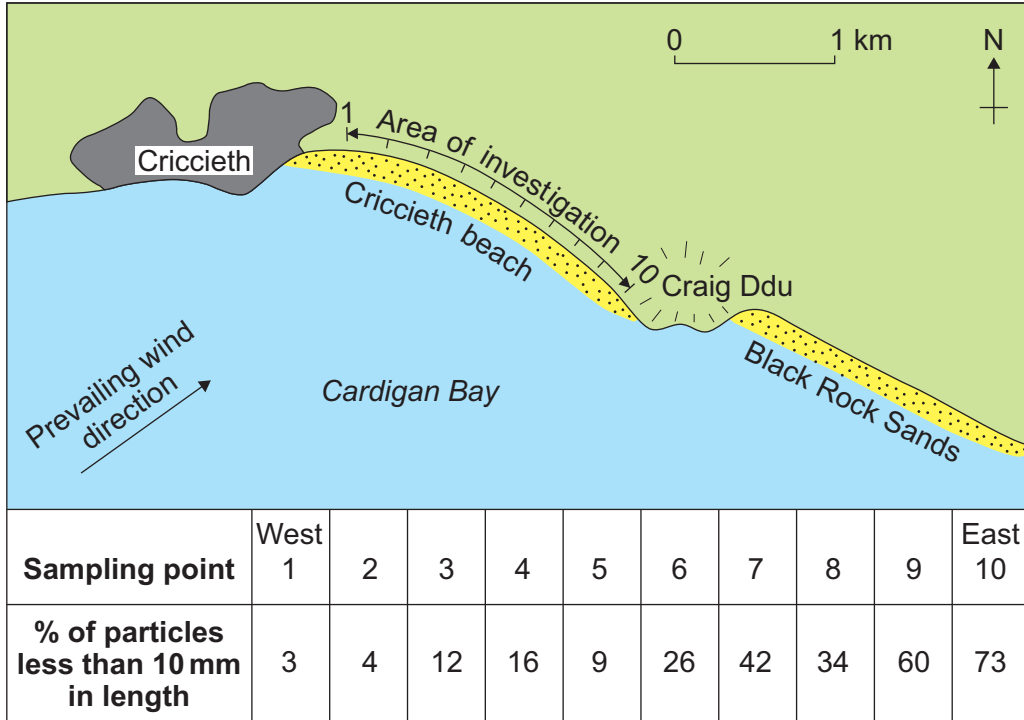
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3 COASTAL ENVIRONMENTS

3 (a) Study **Figure 5** which shows the size of beach material along Criccieth beach, Cardigan Bay.

Figure 5



3 (a) (i) Describe the pattern shown by the data in **Figure 5**.

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3 (a) (ii) Suggest reasons for the pattern shown by the data in **Figure 5**.

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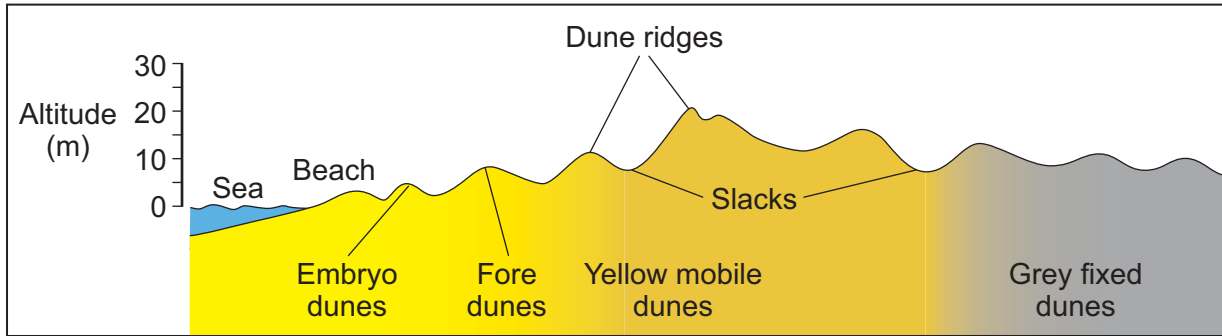
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3 (b) Study **Figure 6**, a cross-section of a dune system.

Figure 6



3 (b) (i) Describe how the dunes change inland.

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3 (b) (ii) Explain the conditions needed for the development of coastal dunes.

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3 (c) Using a case study, assess the causes and consequences of coastal flooding.

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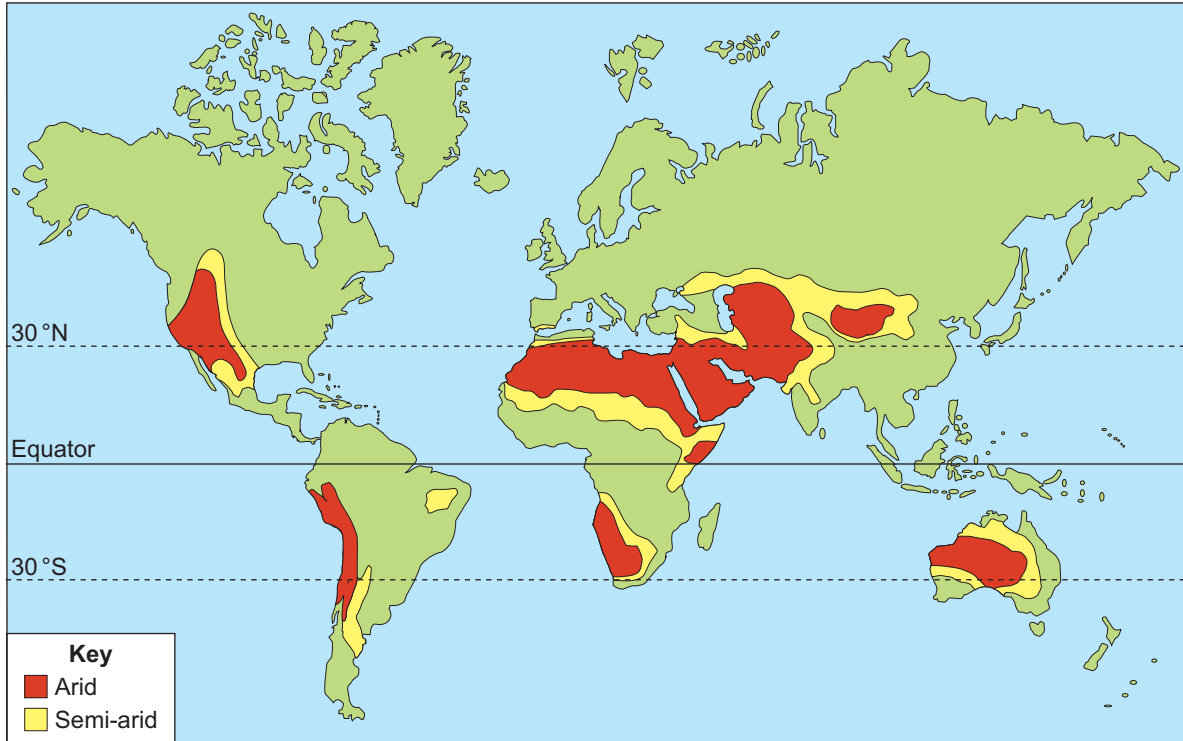
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4 HOT DESERT ENVIRONMENTS AND THEIR MARGINS

4 (a) Study **Figure 7** which shows the distribution of arid and semi-arid areas.

Figure 7



4 (a) (i) Describe the distribution of arid and semi-arid areas shown in **Figure 7**.

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4 (a) (ii) Explain the distribution of arid areas shown in **Figure 7**.

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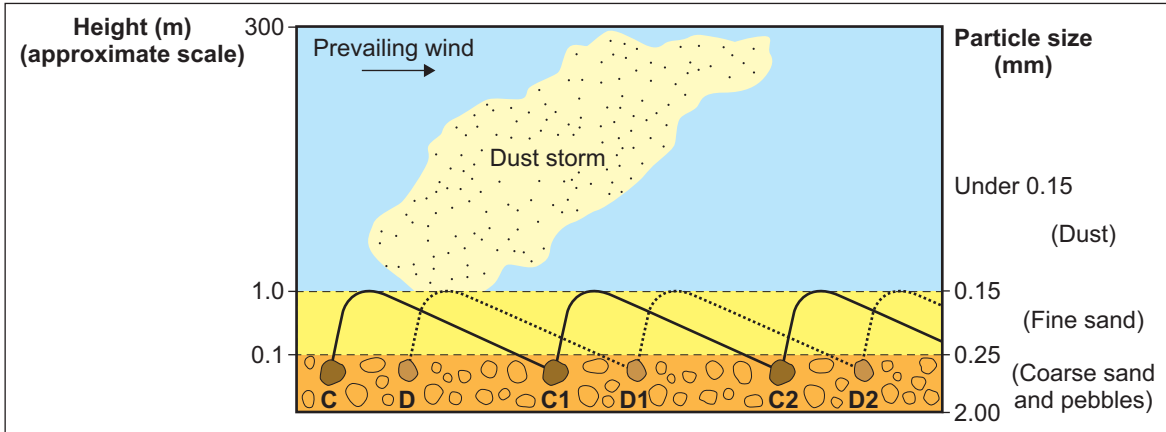
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4 (b) Study **Figure 8** which shows how material is transported by the wind.

Figure 8



4 (b) (i) With reference to **Figure 8**, outline how wind transports material of different sizes.

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4 (b) (ii) Explain how methods of wind transportation affect the processes of deflation and abrasion.

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End of Section A
Turn over for Section B

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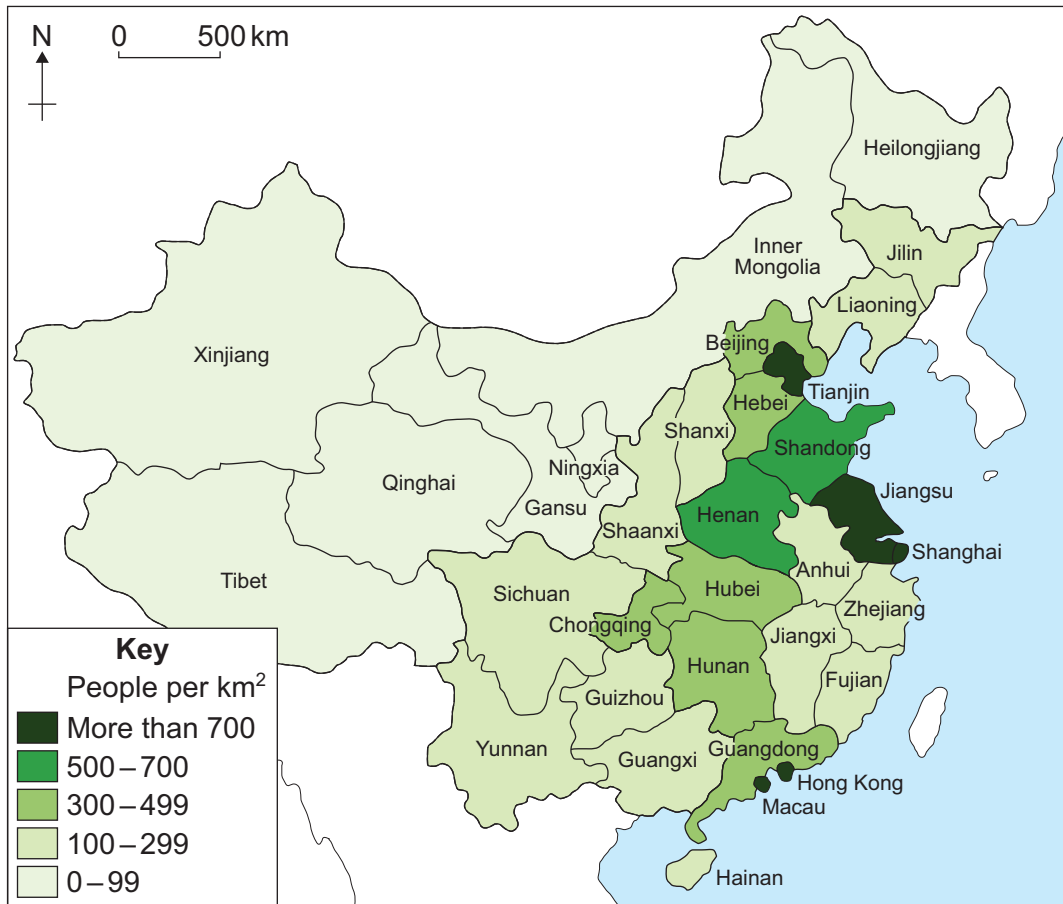
SECTION B

Answer **Question 5** and **one other** question from this section.

5 POPULATION CHANGE

5 (a) Study **Figure 9** which shows population density in China.

Figure 9



5 (a) Describe the pattern shown in **Figure 9**.

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5 (b) Explain why the population density of an area may change over time.

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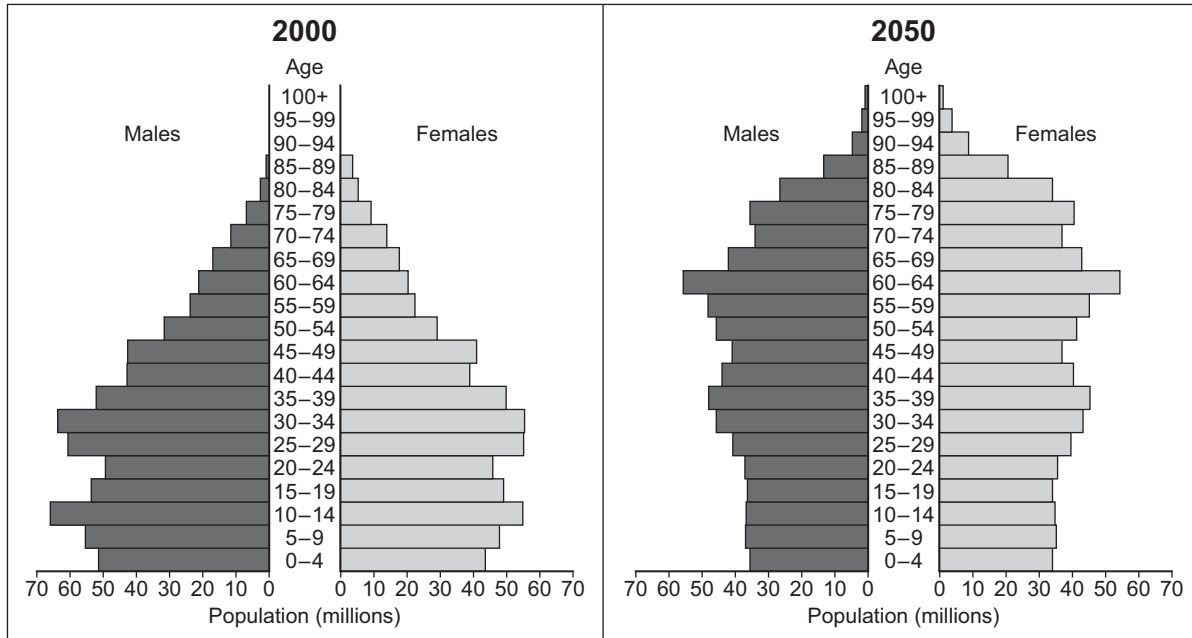
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5 (c) Study **Figures 10a** and **10b** which show China's population structure in 2000 and 2050 (projected). China introduced a population control policy in 1979.

Figure 10a

Figure 10b



5 (c) To what extent do **Figures 10a** and **10b** suggest that China's population policy will allow sustainable development?

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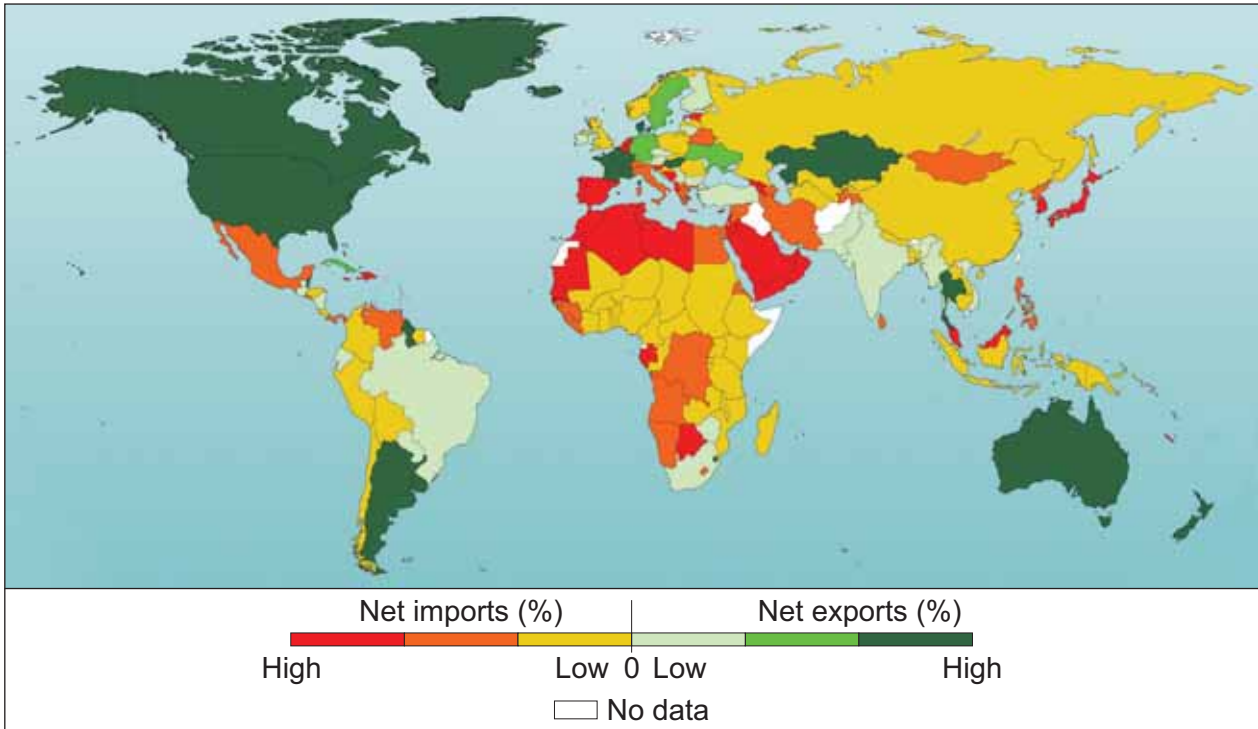
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6 FOOD SUPPLY ISSUES

6 (a) Study **Figure 11** which shows worldwide trading patterns in food between 2000 and 2002.

Figure 11



6 (a) (i) Outline the pattern shown in **Figure 11**.

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6 (a) (ii) Suggest reasons why some countries are net importers of food.

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6 (b) Explain how genetically modified crops can increase the food supply.

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6 (c) To what extent can an increase in the demand for organic produce and locally sourced food be seen as environmentally and economically beneficial?

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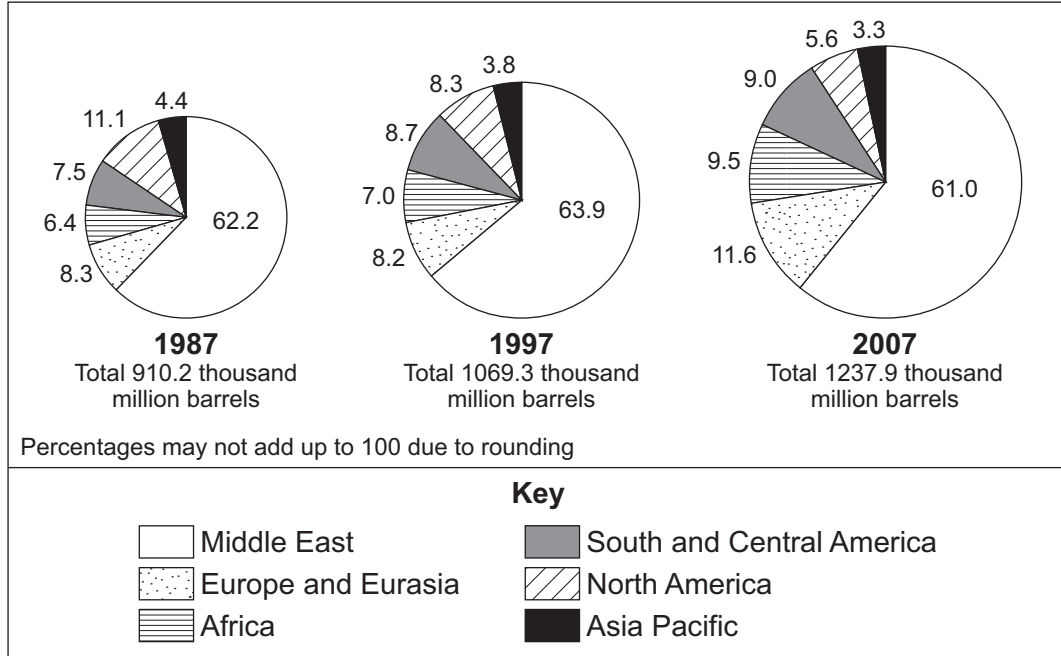
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7 ENERGY ISSUES

7 (a) Study **Figure 12** which shows the percentage distribution of proven oil reserves in 1987, 1997 and 2007.

Figure 12



7 (a) (i) Summarise the changes shown in **Figure 12**.

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7 (a) (ii) In 2007, it was predicted that oil reserves would last a further 41.6 years. Explain why oil reserves may be exhausted in this time.

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7 (b) Comment on the advantages and disadvantages of using biomass as a source of energy.

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7 (c) Discuss the view that nuclear power can be managed so that it is an environmentally sustainable source of energy.

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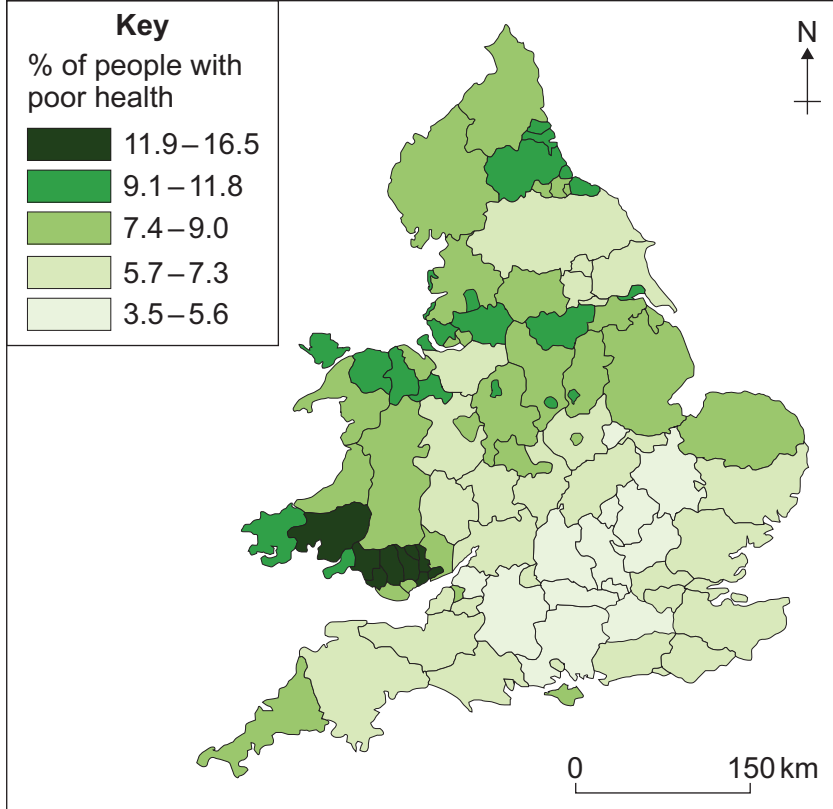
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8 HEALTH ISSUES

8 (a) Study **Figure 13** which shows the percentage of people who stated that they were in poor health in England and Wales in the 2001 census.

Figure 13



8 (a) (i) Describe the pattern shown in **Figure 13**.

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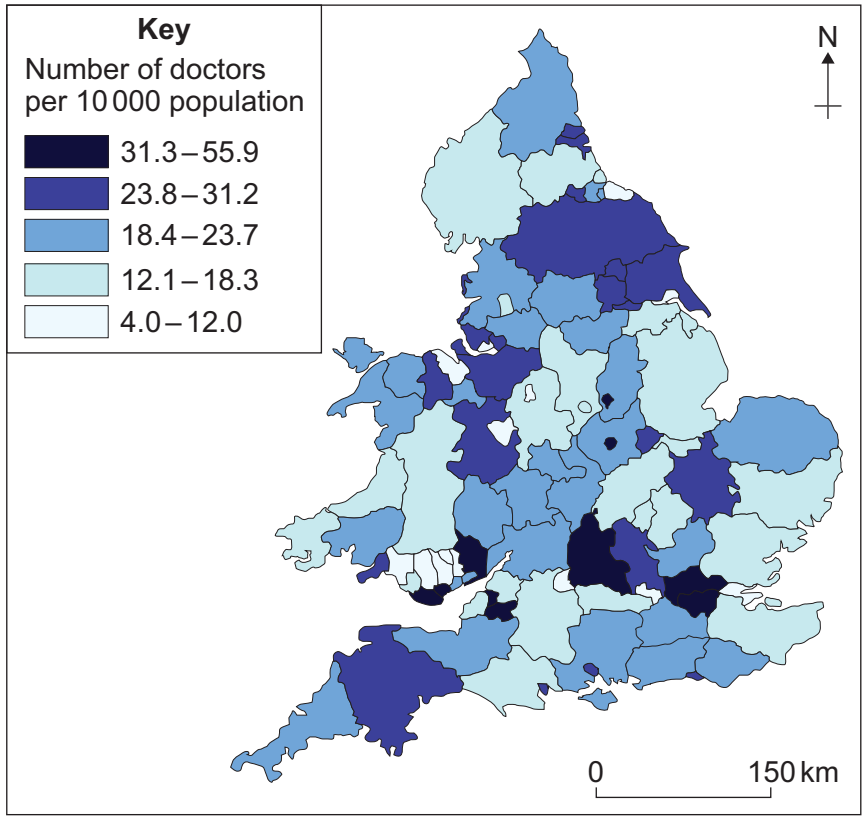
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8 (a) (ii) Study **Figure 14** which shows the number of doctors per 10 000 population in 2001.

Figure 14



Describe the relationships between the information shown in **Figure 14** and that shown in **Figure 13**.

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8 (b) Suggest reasons for regional variations in health in the UK.

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8 (c) Discuss issues associated with pharmaceutical transnational corporations regarding research, production and distribution of drugs.

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