

Centre Number						Candidate Number				
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Candidate Signature										



General Certificate of Education
Advanced Subsidiary Examination
June 2010

Geography

GEOG1

Unit 1 Physical and Human Geography

Friday 21 May 2010 9.00 am to 11.00 am

For this paper you must have:

- the Ordnance Survey map extract (enclosed).

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 Question 1 and **one other** from **Section A** and Question 5 and **one other** from **Section B**.
- Do all rough work in this book. Cross through any work you do not want to be marked.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 120.
- Each question is worth 30 marks.
- 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
1	
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TOTAL	



J U N 1 0 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) Study **Figure 1** which is an Ordnance Survey map extract of part of the valley of the River Dee in Dentdale, North Yorkshire.

1 (a) (i) Describe the long profile of the River Dee from one of its sources at 775833 to the bridge in Dent at 707872.

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(4 marks)

1 (a) (ii) Contrast the cross profile of the valley occupied by the river at 775851 (Dee Side House) with that at 715868.

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1 (b) Explain why a river valley changes in its cross profile downstream.

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2 COLD ENVIRONMENTS

2 (a) Define the term 'periglacial'.

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(2 marks)

2 (b) Outline the process of frost shattering.

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(3 marks)

2 (c) Explain the annual changes in the active layer above the permafrost.

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(4 marks)



2 (d) Study **Figure 2** which is a photograph of patterned ground.

Figure 2

Photograph not reproduced here due to third-party copyright constraints.

2 (d) Describe the patterned ground shown in **Figure 2** and explain its formation.

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2 (e) Discuss how a balance may be found between protection and development in Antarctica.

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3 COASTAL ENVIRONMENTS

3 (a) Study **Figure 3** which is a photograph of constructive waves.

Figure 3



3 (a) (i) Describe the characteristics of the waves shown in **Figure 3**.

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(2 marks)

3 (a) (ii) Outline the effects of constructive waves such as those shown in **Figure 3**.

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(3 marks)



3 (b) Explain the role of sub-aerial weathering in coastal environments.

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3 (c) Explain the formation of headlands and bays.

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4 HOT DESERT ENVIRONMENTS AND THEIR MARGINS

4 (a) Distinguish between arid and semi-arid areas.

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(2 marks)

4 (b) (i) Study **Figure 4** which shows vegetation in Death Valley, California, an arid area.

Figure 4



4 (b) (i) Describe the characteristics of the vegetation shown in **Figure 4**.

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(3 marks)

4 (b) (ii) Explain how vegetation of arid areas is adapted to the climate.

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4 (c) Describe and explain the different sources of water in hot desert environments.

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End of Section A

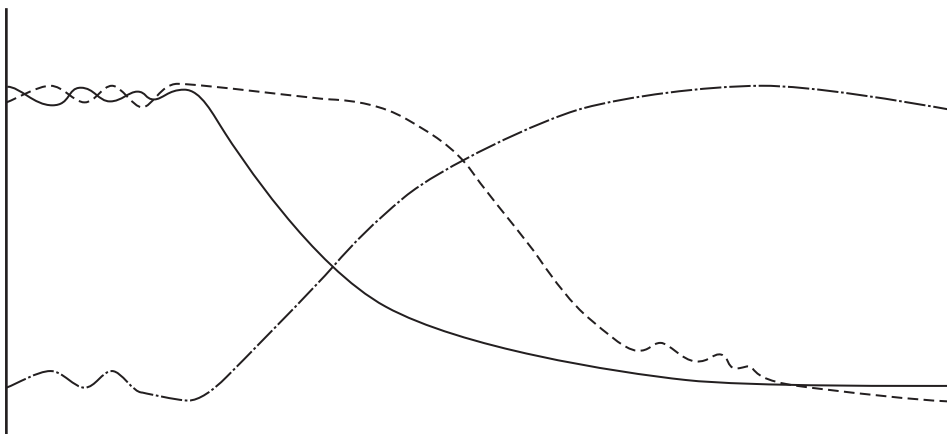


Section B

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

5 POPULATION CHANGE

- 5 (a)** Study **Figure 5** which shows a partly completed diagram of the demographic transition model.

Figure 5

- 5 (a)** Complete **Figure 5** by adding appropriate labels to the diagram.

(4 marks)

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5 (b) Study **Figure 6** which shows birth rates, death rates and total population for Malaysia from 1960 to 2007.

Figure 6

Date	Birth rate (per 1000 per year)	Death rate (per 1000 per year)	Total population (millions)
1960	47	20	8
1970	44	16	10
1980	44	13	14
1990	37	11	18
2000	27	5	23
2007	22	5	25

5 (b) To what extent does Malaysia fit the demographic transition model for the time period shown in **Figure 6**?

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5 (c) Describe how the population structure of a country in stage 2 of the demographic transition model is different from that of a country in stage 4.

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6 FOOD SUPPLY ISSUES

6 (a) What is meant by ‘the geopolitics of food’?

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(4 marks)

6 (b) Outline the characteristics of an extensive livestock farming system.

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6 (c) Study **Figure 7** which is an extract from a geographical publication about coffee production.

Figure 7

Black gold?

Coffee is the planet’s number one cash crop. Many people work at subsistence level in poorer countries – growing enough crops to feed their families and, perhaps, selling a little surplus at market to make some money and send their children to school. The rest are part of the global economy, producing cash crops for export and at the mercy of world market forces – having to sell their crops at prices that are largely determined by the richer countries.

Problems for the growers

In Ethiopia’s Kafa province, Mohammed Ali Indris has seen his combined income from coffee and corn drop from US\$320 a year to around US\$60 for the coffee he sells. He can no longer sell his corn, as it has to be eaten by his extended family of 12:

“Five to seven years ago, I was producing seven sacks of unprocessed coffee and this was enough to buy clothes, medicines, services and solve so many problems. Now if I sell four times as much, it is impossible to cover all my expenses.”

Around the world, such problems are increasing in countries where farmers have planted coffee at the expense of their traditional subsistence crops. At the same time as their coffee has become almost worthless, demand for food has increased the price of imported staples.

6 (c) Using **Figure 7** and your own knowledge, explain the problems for growers of switching to cash crop production.

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7 ENERGY ISSUES

7 (a) (i) Distinguish between primary and secondary energy.

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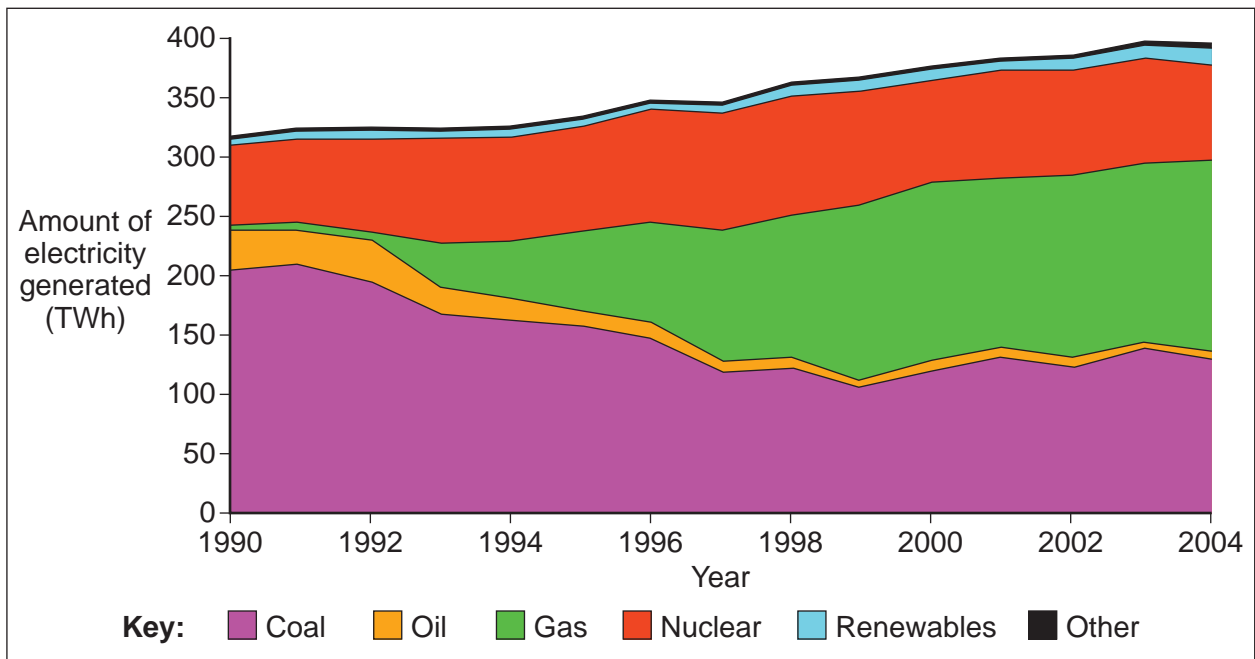
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(4 marks)

7 (a) (ii) Study **Figure 8** which shows the energy mix for electricity production in the United Kingdom from 1990 to 2004.

Figure 8



7 (a) (ii) Describe and suggest reasons for the changes shown in **Figure 8**.

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7 (b) For **one** non-renewable source of energy, summarise features of world trade in the commodity.

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7 (c) Discuss advantages and disadvantages of **two** contrasting approaches to managing energy.

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8 HEALTH ISSUES

8 (a) Distinguish between morbidity and mortality.

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8 (b) For **one** 'disease of affluence', summarise features of its global distribution.

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- 8 (c) Study **Figure 9** which is an extract from the website of a transnational corporation that makes tobacco products.

Figure 9

GLOBAL TOBACCO MARKET

Today

The tobacco industry produces more than 5400 billion cigarettes a year globally.

The biggest market is China where some 350 million smokers consume around 2200 billion cigarettes a year, 40 per cent of the global total. The industry in China is state-owned.

Outside China, international tobacco companies account for around 52 per cent of global sales.

The future

Regulation of the industry continues to increase by including graphic health warnings on packs, severe restrictions on advertising and tougher restrictions on smoking in enclosed public places.

Generally speaking, we think smokers will consume fewer cigarettes each and smaller percentages of populations will smoke. However, the number of adults in the world over the age of 20 is forecast to grow by 11 per cent by 2015. As a result, we expect global annual sales will be broadly unchanged in a decade's time.

Profits and living standards

The tobacco industry contributes to the economies of over 100 countries and provides employment for more than 100 million people and major revenues for governments. Our own business enables governments worldwide to gather over £16 billion a year in taxes, while our companies and associate companies employ over 97 000 people.



8 (c) Using **Figure 9** and your own knowledge, comment on the role which transnational tobacco corporations play in influencing world health.

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END OF QUESTIONS



