

**ADVANCED GCE
GEOGRAPHY A**

Options in Physical and Human Geography
TUESDAY 12 JUNE 2007

2683

Afternoon

Time: 1 hour 30 minutes

Additional materials: Answer Booklet (8 pages)
Enclosed with this question paper:
1:25 000 map extract



INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and Candidate number in the spaces provided on the answer paper/booklet.
- Answer two questions, one from Section A and one from Section B.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

- The number of marks for each question is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is 90.
- Where relevant, you should include sketch maps and diagrams and make use of examples of places you have studied.
- You will be awarded marks for the quality of written communication.

This document consists of **6** printed pages, **2** blank pages and an OS map.

Section A**Group A Options**

Answer **one** question from Questions 1 to 10.

Option 1: Coastal Environments

- Either 1** (a) Describe the influence of lithology (rock type) and structure on the plan of coastlines. [20]
- (b) Explain how the rate of cliff retreat is the result of the interaction of a variety of factors. [25]
- Or 2** (a) Describe the impact of human activities on coastal systems. [20]
- (b) Explain the role of vegetation in the development of coastal landforms. [25]

Option 2: Fluvial Environments

- Either 3** (a) Describe the ways in which water flow varies in channels of different cross-section and plan. [20]
- (b) Explain how riffle and pool sequences are related to the development of meanders. [25]
- Or 4** (a) Describe variations in a river's width, depth and gradient from source to mouth. [20]
- (b) Explain how changing water levels within a river channel affects fluvial processes. [25]

Option 3: Glacial and Periglacial Environments

- Either 5** (a) Describe the characteristic landforms and landscapes produced by ice sheets. [20]
- (b) Study the 1:25 000 scale OS map of part of the Grampian Mountains in the Scottish Highlands.
Explain how ice has produced the distinctive landscape features shown in the OS map extract. [25]
- Or 6** (a) Describe the factors that lead to glacial advance and retreat. [20]
- (b) Explain how a glacier can both erode and deposit. [25]

Option 4: Hot arid and Semi-arid environments

- Either** **7** **(a)** Describe the various ways in which hot arid and semi-arid environments can be defined. [20]
- (b)** Explain the distribution of hot arid and semi-arid environments. [25]
- Or** **8** **(a)** Describe the causes of land degradation in arid environments. [20]
- (b)** Explain why some locations suffer from land degradation more than others in arid environments. [25]

Option 5: Applied Climatology

- Either** **9** **(a)** Study the 1:25 000 scale OS map of part of the Grampian Mountains in the Scottish Highlands.
How might the local climates in Squares 38 84 and 43 83 differ? [20]
- (b)** Explain how human activities are influenced by variations in topo-climates. [25]
- Or** **10** **(a)** Describe the ways in which human activities make use of shelter belts and wind breaks. [20]
- (b)** Explain how size of urban area influences differences in climate between urban and rural areas. [25]

Section B**Group B Options**

Answer **one** question from Questions 11 to 18.

Option 6: Agriculture and Food

- Either 11** (a) Study the 1:25 000 scale OS map of part of the Grampian Mountains in the Scottish Highlands.
Describe the influence of the physical environment, such as that shown on the OS map extract, on agricultural systems. [20]
- (b) Explain how farmers can modify climates and soils to increase agricultural production. [25]
- Or 12** (a) Describe both the direct and indirect energy inputs into agro-ecosystems. [20]
- (b) Explain why some agricultural systems are more sustainable than others. [25]

Option 7: Manufacturing Industry: Location, Change and Environmental Impact

- Either 13** (a) Describe the environmental impact of contemporary industrialisation on LEDCs and NICs. [20]
- (b) Explain how the internal organisation of transnational companies (TNCs) affects their locational pattern. [25]
- Or 14** (a) Describe changes in the manufacturing industries in MEDCs since 1980. [20]
- (b) Explain how both internal and external economies of scale can influence the location of manufacturing industry. [25]

Option 8: Service Activities: Location, Change and Environmental Impact

- Either 15** (a) Describe the main changes in the nature of retailing over the past 40 years. [20]
- (b) Explain why changes in retailing occurred over the past 40 years. [25]
- Or 16** (a) Describe the behavioural approaches to understanding the location of service activities. [20]
- (b) Explain how central place theory offers both advantages and disadvantages to an understanding of the location of service activities. [25]

Option 9: Tourism and Recreation and their Environmental Impacts

- Either 17 (a)** Describe how changing social and economic conditions have influenced the development of tourism since the 18th century. [20]
- (b)** Explain the role of natural resources in attracting tourists to particular locations. [25]
- Or 18 (a)** Describe the ways in which governments in LEDCs can promote the development of tourism in their respective countries. [20]
- (b)** Explain how political changes and political crises can influence international patterns of tourism. [25]

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