



**GEOGRAPHY  
HIGHER LEVEL  
PAPER 3**

Thursday 15 November 2001 (morning)

2 hours

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INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer Section A  
and  
Either: two questions from Section B;  
Or: one question from Section B and one question from Section C.

**SECTION A**  
**TOPOGRAPHICAL MAPPING**

Answer all parts of the question in this section.

1. The map extract shows an area in Hungary on the north shore of Lake Balaton, which lies about 100 kilometres to the south west of the Hungarian capital city of Budapest. The lake, one of the largest in Europe, is about 80 kilometres in length and averages 10 kilometres in width. The area has a temperate interior climate. Summers are warm and winters are cold with frost and snow, mainly from November to March. Rainfall is mostly from convectional summer storms. The area is noted for tourism and wine production. The scale of the map is 1:50 000.

The contour interval is 20 m.

In some places, broken contours are at an interval of 10 m.

Submarine contours in blue indicate the depth of the lake.

- (a) (i) State the height of the surface of Lake Balaton in metres above sea level. [1 mark]
- (ii) Estimate to the nearest square kilometre the area of the map covered by Lake Balaton. [1 mark]
- (b) Draw a sketch section from Boncsos-t (208471) to the observation tower at Kisfaludy (326466). Label your section to show the main physical and human features. [8 marks]
- (c) Describe and explain the pattern of land communications in relation to the relief. [6 marks]
- (d) Describe and explain the distribution of forests, meadows and vineyards in the area south of grid line 50. [4 marks]

|  |                      |  |                                      |  |                             |  |                             |
|--|----------------------|--|--------------------------------------|--|-----------------------------|--|-----------------------------|
|  | Main roads           |  | Historic building                    |  | Hotel, hostel               |  | Woodland, meadow            |
|  | Secondary roads      |  | Natural beauty spot                  |  | Campsite                    |  | Farmland                    |
|  | Minor roads          |  | Castle, palace, abbey, ruin          |  | Parking, motel              |  | Contours                    |
|  | Information          |  | Church, chapel, cross                |  | Cycle route                 |  | Vineyards with wine cellars |
|  | Bus stop             |  | Observation tower, radio transmitter |  | Marked footpath             |  | Lake, pond, stream          |
|  | Footpath/cyclepath   |  | Viewpoint                            |  | Lake bathing                |  | Well, spring, forest hut    |
|  | Other paths          |  |                                      |  | Golf course                 |  | District boundary           |
|  | Railway with station |  |                                      |  | Mini-golf, tennis           |  |                             |
|  | Landing strip        |  |                                      |  | Riding                      |  |                             |
|  | Ship routes          |  |                                      |  | Boat hire                   |  |                             |
|  |                      |  |                                      |  | Sailing school, windsurfing |  |                             |



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Answer either **two** questions from Section B or **one** question from Section B and **one** question from Section C.

**SECTION B**

**THE NATURAL ENVIRONMENT**

2. With reference to **one** named example for **each** of the following, describe and explain how humans have attempted to control the processes of
- (a) erosion;
  - (b) deposition;
  - (c) mass movement on slopes. *[20 marks]*
3. (a) Describe and explain the natural factors that cause the velocity (speed) of a river to vary. *[12 marks]*
- (b) With the aid of a labelled graph, explain how changes in velocity affect a river's ability to transport its load. *[8 marks]*
4. Select **one** climate type from List A and **one** from List B.

List A

Hot Desert  
Tropical Continental (Savanna)  
Tropical Monsoon

List B

Sub-polar (Tundra)  
Mediterranean  
Mid-latitude Continental

In **each** case

- (a) name **one** area of the world where the climate occurs. *[1 + 1 mark]*
  - (b) explain the main characteristics of the climate. *[9 + 9 marks]*
5. With reference to **one** biome that you have studied,
- (a) name that biome and state **one** area of the world in which it is located; *[1 mark]*
  - (b) describe and explain the main characteristics of the biome; *[12 marks]*
  - (c) outline the ways in which agricultural activities have affected the stability of the biome in this area. *[7 marks]*

**SECTION C**

**RESOURCES**

6. Many geographers believe that the development of sustainable energy resources is the only way to meet future energy demands. With reference to at least **three** types of sustainable energy resources, explain why doubts still exist about their ability to provide large amounts of power at low cost. *[20 marks]*
7. The increasing demand for resources has led to resource extraction in areas with adverse (difficult) physical conditions. With reference to **one** such area,
- (a) name and locate the area and the type of resource being extracted; *[2 marks]*
  - (b) describe why conditions in this area are difficult for resource extraction; *[7 marks]*
  - (c) explain how technological innovations have helped to overcome the adverse physical conditions; *[6 marks]*
  - (d) describe the effects caused by resource exploitation on the natural environment of the area. *[5 marks]*
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