



**GEOGRAPHY
HIGHER LEVEL
PAPER 3**

Tuesday 7 November 2000 (morning)

2 hours

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.

The map shows the area around Bratislava, which is the capital city of the central European state of Slovakia. Bratislava, which lies close to the border with Austria and Hungary, has a population of 450 000, and is an important centre for administration, services and manufacturing. The area has a typical central European climate with warm summers and cold winters, with frequent radiation fog in low lying areas, mainly in the winter months of November to January.

The photograph does not cover the exact same area as that shown on the map. The photograph was taken four years later than the published date of the map and therefore includes some developments not present on the map.

The scale of the map is 1:50 000. The contour intervals are shown in the key.

1.

(a)

State the direction of flow of the Dunaj River. Give evidence from the map to support your answer.

[1 mark]

(b)

Draw a labelled sketch map the same size as the photograph to show the area that appears on **both** the map **and** the photograph, to include only the following:

(i)

the Dunaj River

(ii)

the vineyards

(iii)

Bratislava Airport (Flughafen Bratislava)

On your sketch map add a scale to show the distance in metres represented by one centimetre.

[8 marks]

(c)

Describe the advantages and disadvantages of the location of Bratislava Airport.

[5 marks]

(d)

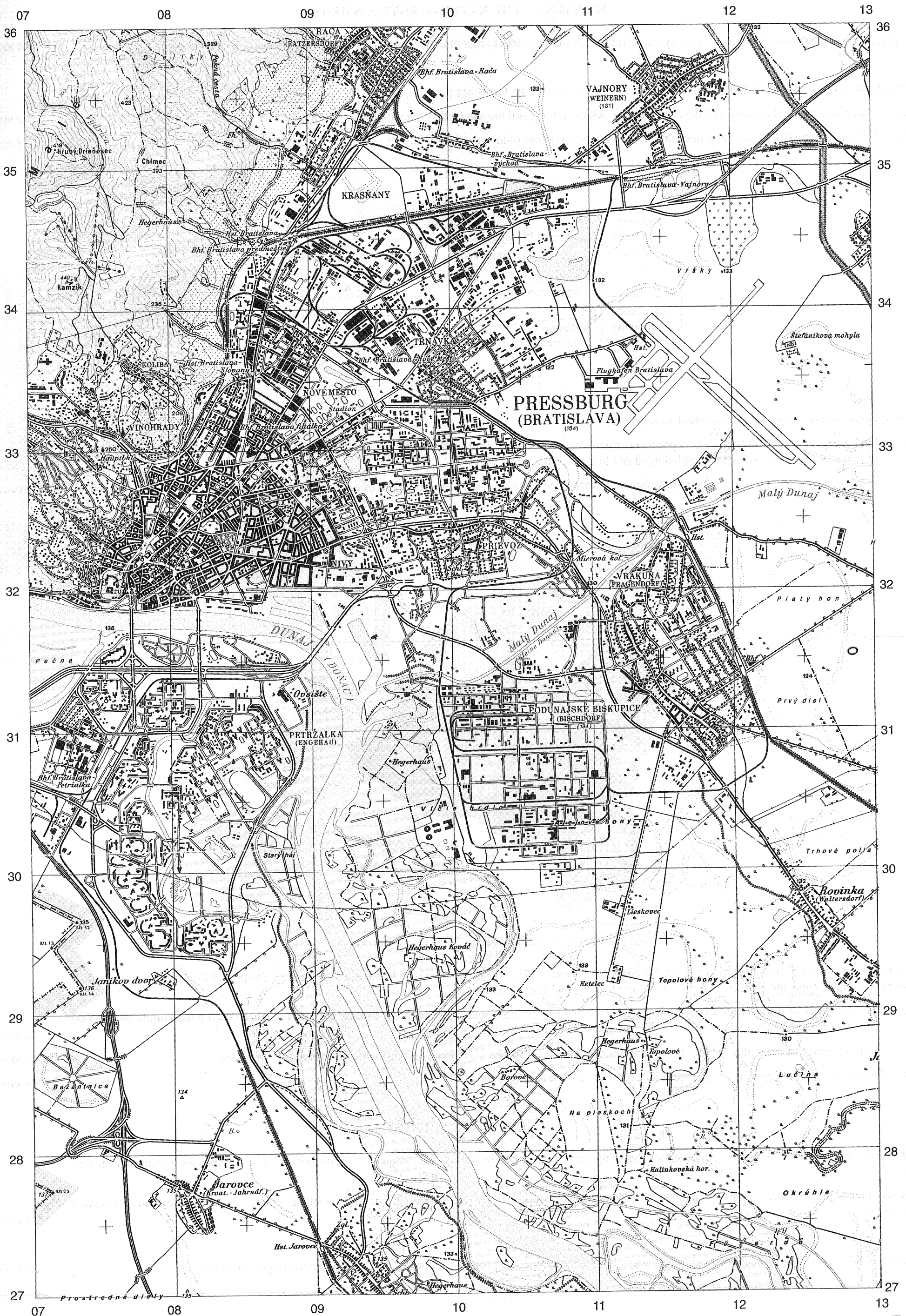
As an urban planner for Bratislava, you are asked to determine a suitable location for a new out-of-town retail park.

A retail park is an area set aside only for superstores (very large shops) each selling one type of product, such as furniture, toys, electrical goods, carpets, garden equipment or home improvement materials.

The retail park will cover an area of approximately one square kilometre.

State precisely (using the map grid reference system) where you would locate this retail park and give reasons why you decided upon this location.

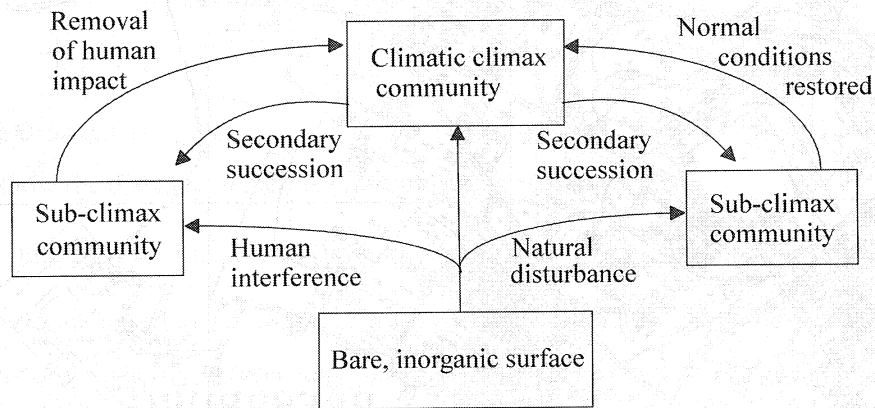
[6 marks]
- © Imagery Copyright Aerial Images Inc., 1999 and SOVINFORMSPUTNIK, 1999. www.terraserver.com
-
- Key
- | | | | |
|--|----------------------------------|--|-----------------------------|
| | Church | | Trig point |
| | Chapel | | Church as a trig point |
| | Houses | | Chapel as a trig point |
| | Power lines | | Austrian border |
| | Transmitter | | Railway |
| | Quarry | | Railway station |
| | Fences | | Single tree |
| | Campsite | | Gardens |
| | Cross | | Forest |
| | Memorial | | Vineyards |
| | Parish Boundary | | Marsh |
| | Motorway | | Embankment |
| | Road Class 1 width at least 5.5m | | Artificial ditch |
| | Road Class 2 width at least 4.0m | | Natural ditch or depression |
| | Road Class 3 width at least 2.3m | | Spring, Well |
| | Metalled track | | Surface water channel |
| | Unmetalled track | | Underground water channel |
| | Footpath (wide) | | |
| | Footpath | | |
| | Kilometre marker | | |
| | 100m contour | | |
| | 20m contour | | |
| | 10m contour | | |
- | | | | |
|---|-----------------------|-----------------|---------|
| | River | } over 20m wide | } Width |
| | Canal | | |
| | Stream | | |
| | Canal | } 5 - 20m wide | |
| | Stream | | |
| | Canal, ditch | } up to 5m wide | |
| | Direction of flow | | |
| | Waterfall | | |
| | Lock | | |
| | Sandbank | | |
| | Landing stage | | |
| Translation of words on the map: | | | |
| Bhf | major railway station | | |
| Hauptbhf | main railway station | | |
| Flughafen | airport | | |
| N | | | |
| | | | |
| Scale 1:50 000 | | | |
| Heights are in metres above sea level | | | |
- 880-028



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

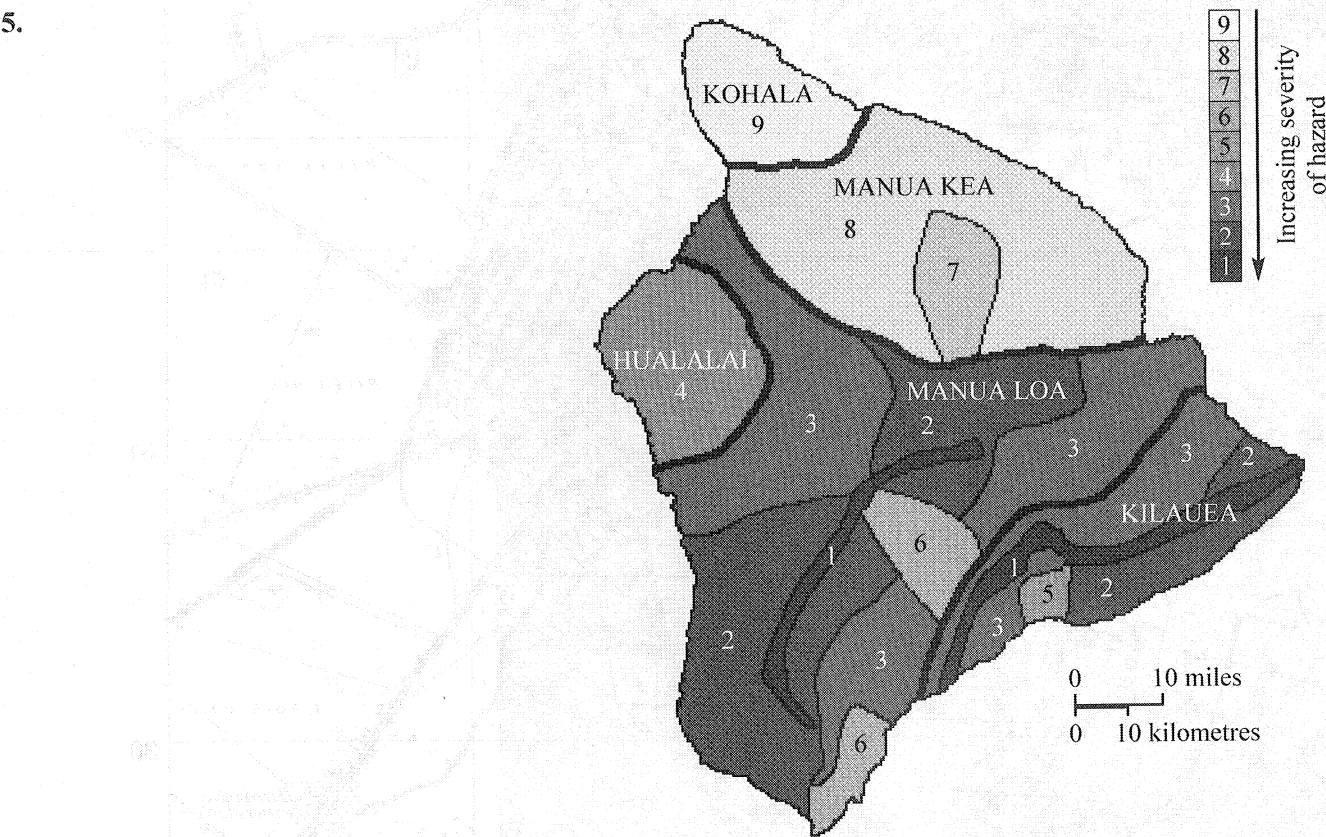
SECTION B - THE NATURAL ENVIRONMENT

2. Using examples, explain how human activity can influence climate at **either** (a) a micro (or local) scale **or** (b) a macro (or global) scale. [20 marks]
3. Select one major flood event that has occurred in a river basin within the last thirty years.
 - (a) Name and locate the basin, and describe ways in which natural and human factors contributed to the flood event. [12 marks]
 - (b) Outline the measures that have been taken, or might be taken, to reduce the future impact and risk of flooding in that basin. [8 marks]



The diagram above shows a model of plant succession.

- (a) With reference to the diagram and a plant succession which you have studied, describe and explain the processes that lead from the initial invasion of a pioneer community to the establishment of climatic climax vegetation. [10 marks]
- (b) With reference to examples, explain how human interference can result in the development of a sub-climax community. [10 marks]



Source of map: <http://www.hvo.wr.usgs.gov/hazards/lavazones>

The map shows the volcanic hazard zones on the island of Hawaii. The zones, which are ranked from 1 to 9, show the probability of being covered by lava flows. Rank 1 has the greatest risk and rank 9 the least risk of lava coverage.

- (a) State the types of information that need to be gathered in order to draw such a risk map and outline the ways in which such a map might be of value to the inhabitants of the island. [6 marks]
- (b) With reference to examples explain how the types of materials erupting from a volcano influence the volcano's structure. [10 marks]
- (c) Outline the ways in which volcanic activity can be of benefit to people. [4 marks]

SECTION C - RESOURCES

6. "The main problem that faces the planet is not the depletion of available resources but rather the environmental damage that their exploitation will cause."

Discuss the validity of the above statement with reference to examples of environmental issues and problems caused by the exploitation of named resources. [20 marks]
7. Discuss, with reference to at least **two** examples, ways in which countries or groups of countries attempt to conserve specific resources. [20 marks]