



GCE AS/A level

1201/01

New AS

GEOGRAPHY G1

CHANGING PHYSICAL ENVIRONMENTS

A.M. MONDAY, 12 January 2009

1½ hours

ADDITIONAL MATERIALS

In addition to this examination paper, you will need an answer book.

INSTRUCTIONS TO CANDIDATES

Answer **all** questions.

Write your answers in the separate answer book provided.

Write your name, centre number and candidate number in the spaces at the top of the answer book.

INFORMATION FOR CANDIDATES

Each question carries **25** marks.

The number of marks is given in brackets at the end of each question or part-question.

You are reminded that assessment will take into account the quality of written communication used in your answers.

THIS PAPER REQUIRES THAT YOU MAKE THE FULLEST POSSIBLE USE OF EXAMPLES IN SUPPORT OF YOUR ANSWERS. SKETCH-MAPS AND DIAGRAMS SHOULD BE INCLUDED WHERE RELEVANT.

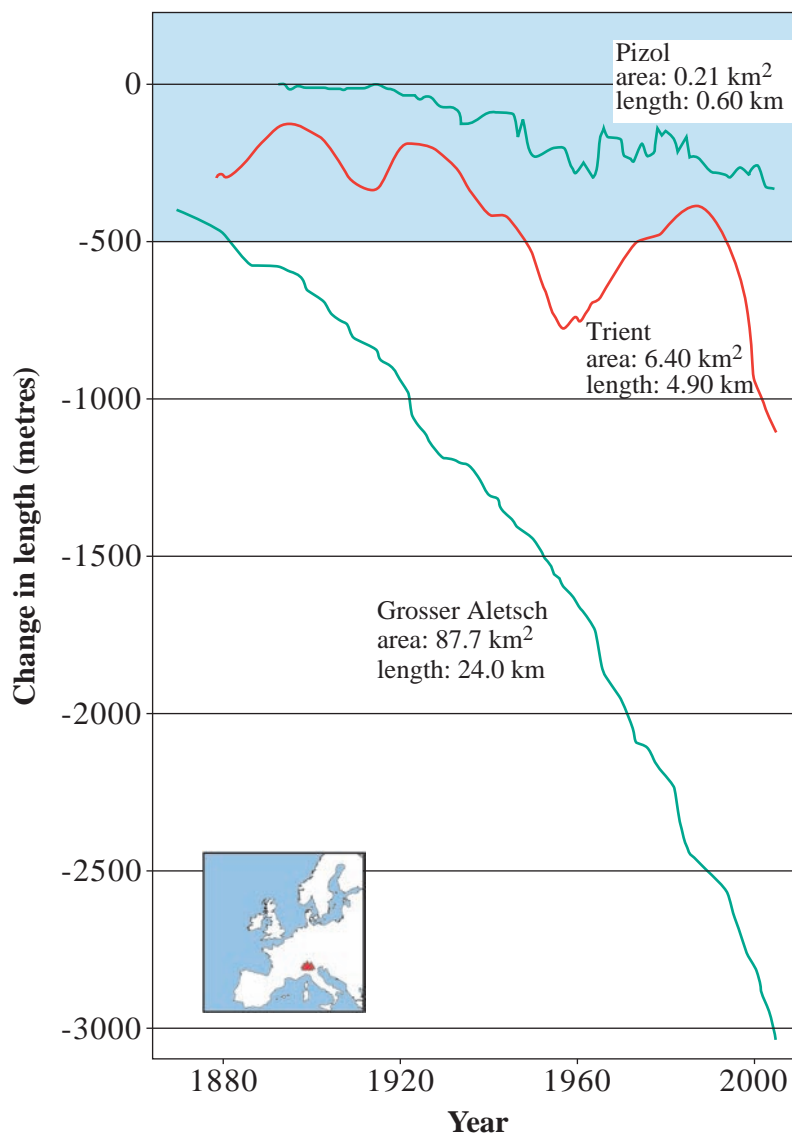
G1 - CHANGING PHYSICAL ENVIRONMENTS

Answer **all** questions

Make the fullest possible use of examples in support of your answers.

Question 1

Figure 1 Glacier retreat for three selected glaciers in the Swiss Alps



http://www.unep.org/geo/ice_snow

- (a) Use **Figure 1** to describe the rates of retreat of the three glaciers. [5]
- (b) Explain how **one** environmental factor and **one** human factor may lead to climate change. [10]
- (c) Outline the impacts of climate change on **one** society you have studied. [10]

Question 2

Figure 2 Tectonic Tourism in Kamchatka, Eastern Siberia



KAMCHATKA

Why go? Banished at the far eastern tip of Siberia, Kamchatka is a rough, tough, bearded Cossack of a place. Two hundred volcanoes, 29 of them active, one road for a peninsula the size of the UK.

What is there to do? Get seismic. Kamchatka is a geothermic hotspot – sooner or later, you'll be climbing a volcano. The easiest one to knock off is Avachinskaya (2,741 metres), which looms above the region's capital.

If it's sulphur you're after, nowhere is more spectacularly bursting in the noxious stuff than the Valley of the Geysers. It has the second highest concentration of geysers on earth. Some 200 geysers gurgle and spew along the banks of the Geysernaya River (30°C even in winter).

Perhaps the most spectacular of Kamchatka's volcanic clusters is the area around Mount Mutnovskaya, which erupted in 1994: thermal rivers run off its slopes, hot springs bubble at its base and fumaroles are everywhere; camping in its ominous shadow is an eerie but magnificent experience.

Getting around: helicopters and vezdekhods (half tank, half personnel carrier) – not a rental car in sight.

Tour operators: Exodus has 19 days in Kamchatka for £2,995pp, full-board, with 13 days of moderate trekking in the Kronotsky Reserve, the Valley of the Geysers and Uzon Valley.

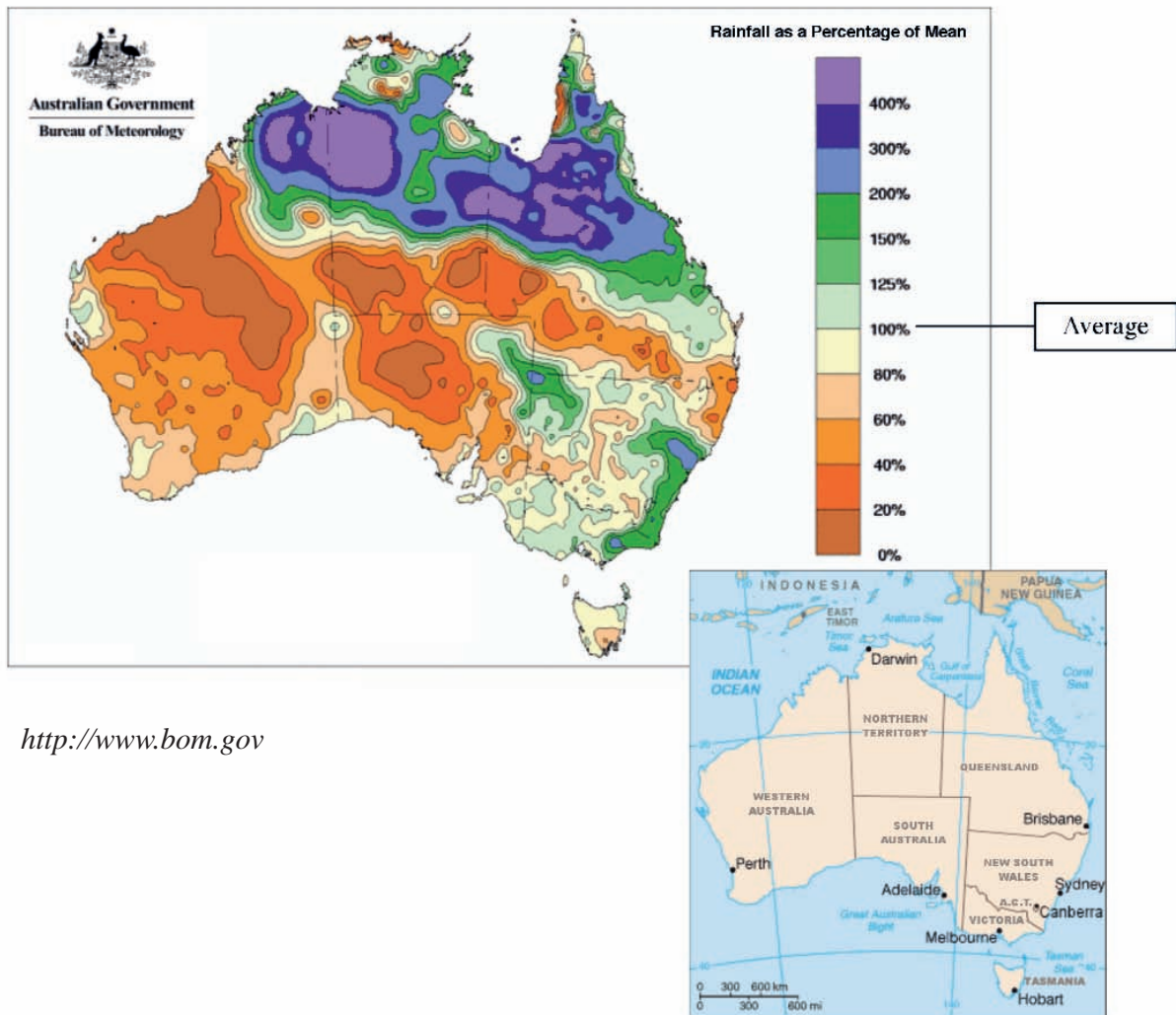
Pioneer tourist rating: 9/10

Source: Adapted from Times Online 30 March, 2003

- (a) Use **Figure 2** to outline how tectonic environments can be seen positively by different groups of people. [5]
- (b) Explain the processes that cause **two** hazards associated with tectonic activity. [10]
- (c) Outline the demographic and economic impacts of tectonic activity. [10]

Question 3

Figure 3 Rainfall in Australia 1 May to 31 July 2007 as a percentage of the mean



<http://www.bom.gov>

<http://www.biocrawler.com>

- (a) Describe the pattern of rainfall variation shown in **Figure 3**. [7]
- (b) Outline the usefulness and limitations of the data shown in **Figure 3** and of the techniques used to display the data. [8]
- (c) Evaluate the methods you used to collect data in an investigation into a changing physical environment. [10]