



**ZIMBABWE SCHOOL EXAMINATIONS COUNCIL**  
General Certificate of Education Advanced Level

**GEOGRAPHY**

PAPER 1

**9156/1**

NOVEMBER 2007 SESSION

3 hours

**1 : 50 000 Survey map is enclosed with this question paper**

Additional materials:  
Answer paper

**TIME** 3 hours

**INSTRUCTIONS TO CANDIDATES**

Write your name, Centre number and candidate number in the spaces provided on the answer paper/answer booklet.

Answer **four** questions.

Answer **one** question from Section A, **two** questions from Section B and **one** question from Section C.

Write your answers on the separate answer paper provided.

If you use more than one sheet of paper, fasten the sheets together.

**INFORMATION FOR CANDIDATES**

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

Sketch maps and diagrams should be drawn wherever they serve to illustrate an answer.

You are advised to spend no longer than 45 minutes on Section A.

You are reminded of the need for good English and clear presentation in your answers.

**This question paper consists of 6 printed pages and 2 blank pages.**

## Section A (Practicals)

Answer one question from this section. Do not spend more than 45 minutes on this question.

- 1 With reference to the map provided (1:50 000 Birchenough Bridge, Zimbabwe),
- (a) draw two sketch maps to show the landforms and drainage of areas A and B as defined below:

	Vertical Grid Limits	Horizontal Grid Limits
Area A	40 and 47	03 and 10
Area B	30 and 37	03 and 10

[12]

- (b) compare the landforms of the two areas and suggest reasons for their differences.

[13]

- 2 You are required to investigate and map the features of a river channel approximately 5km long.

- (a) Describe how you would plan for the field survey.
- (b) Describe the survey methods you would use to collect the data and map the features of the channel.
- (c) What problems would you encounter in carrying out the survey? Suggest possible solutions to these problems.

[6]

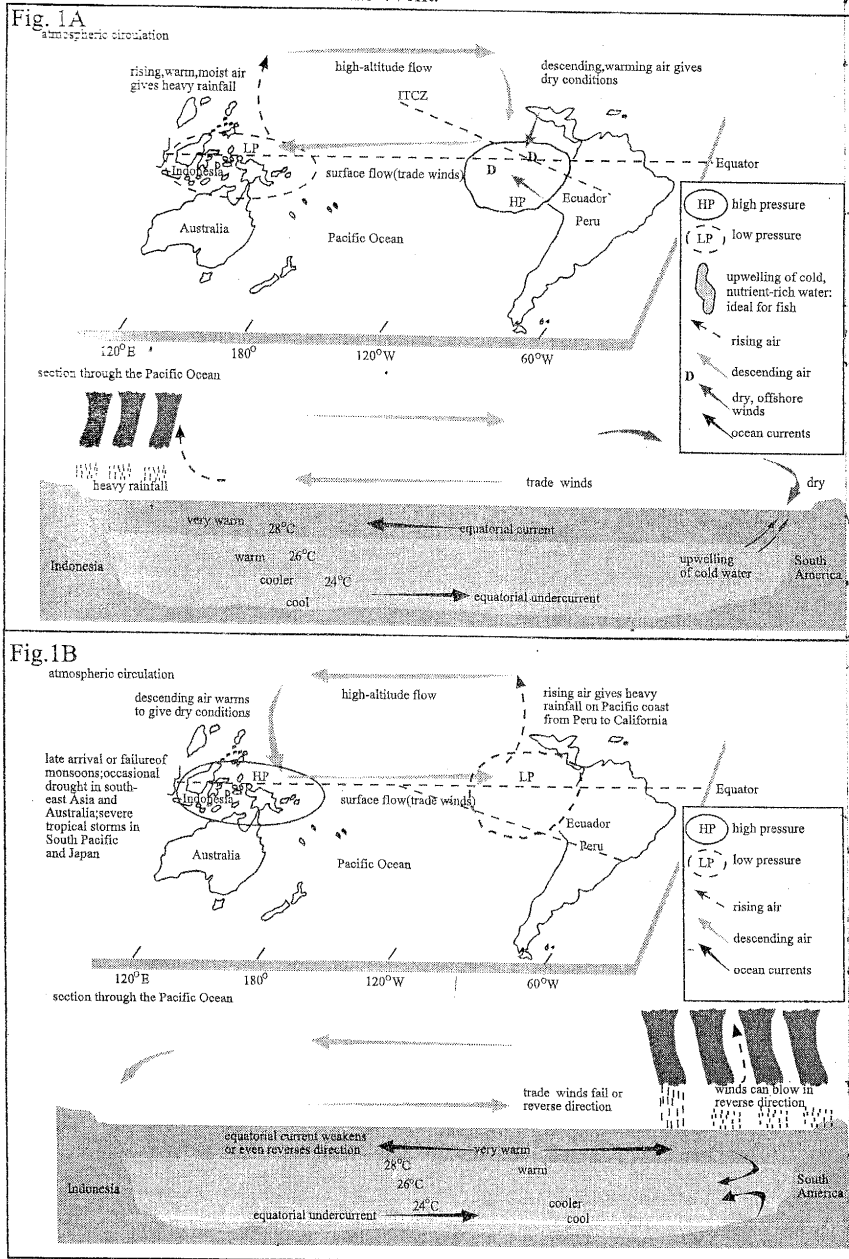
[12]

[7]

Section B (Physical Core)

Answer two questions from this section.

- (a) Briefly describe the conditions leading to high level condensation of water vapour in the atmosphere. [6]
- (b) Fig. 1A shows normal atmospheric circulation and Fig. 1B the atmospheric circulation under the El Nino event.



- (i) What is meant by the term *El Nino event*? [12]
- (ii) With reference to examples, discuss the effects of the El Nino phenomenon on weather patterns and the environment. [7]
- (c) Explain why acid rain should be of serious concern to people. [6]
- (4) (a) Define the terms *rainfall intensity* and *soil moisture*. [6]
- (b) Fig. 2 shows the factors affecting infiltration and surface runoff.

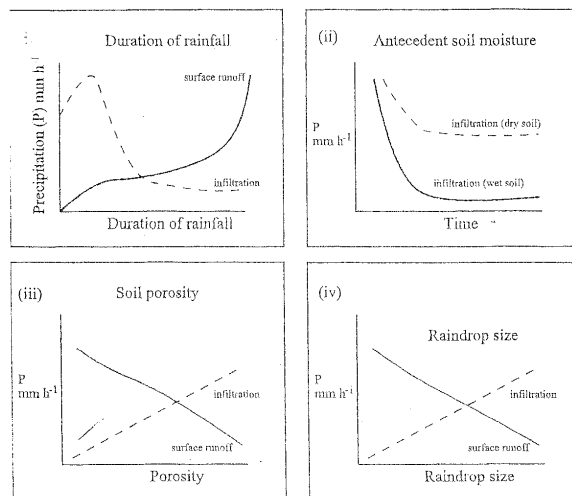


Fig. 2

Describe and explain the effects of each of the factors shown on infiltration and surface runoff.

- (c) How may changes in landuses influence surface runoff? [12]
- (5) (a) With the aid of diagrams, distinguish between slope replacement and parallel slope retreat. [7]
- (b) What geological and climatic conditions are likely to affect slope replacement and parallel slope retreat? [6]
- (c) Outline other factors besides geology and climate that influence slope development. [12]
- [7]

- (a) With the aid of diagrams, describe the formation of laterites in seasonally humid tropics. [6]
- (b) Outline the conditions leading to the dissection of laterites and describe the resultant landforms. [12]
- (c) How do the landforms described in (b) above differ from those found in areas of granite rocks? [7]
- 7 (a) Distinguish between zonal and intra-zonal soils. [6]
- (b) Describe the principal pedogenic (soil-forming) processes in tropical areas. [12]
- (c) To what extent have human activities led to the deterioration of soils in tropical areas? [7]
- 8 (a) Define the terms *biomass* and *biome*. [6]
- (b) Describe and explain the factors affecting the growth of vegetation. [12]
- (c) With reference to an area in the tropical rainforest, outline what could be done to achieve sustainable development in the long run. [7]

### Section C (Physical Options)

Answer **one** question from this section.

- 9 (a) Describe the main processes of mountain building (orogenesis). [9]
- (b) With reference to examples, describe the landforms associated with sedimentary basins. [16]

10 Fig. 3 shows areas that have been affected by floods in recent times.

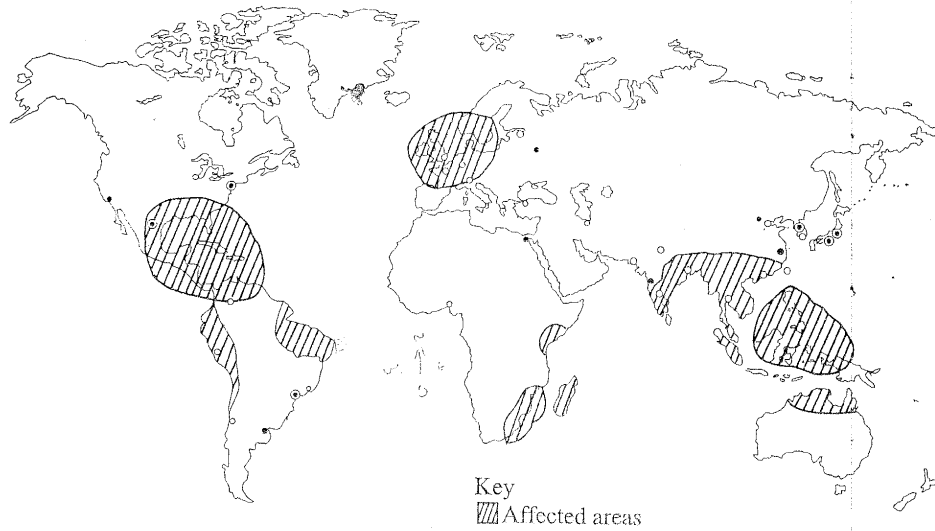


Fig. 3

- (a) Describe and explain why flooding occurs in these areas. [9]
- (b) With reference to examples, assess the effectiveness of measures put in place to reduce the impact of floods. [16]
- 11 (a) Outline the characteristic features of arid and semi-arid ecosystems. [9]
- (b) Describe and explain the main features of dissected uplands in arid areas. [16]
- 12 (a) Describe the processes of marine erosion. [9]
- (b) With the aid of diagrams, describe the landforms resulting from marine erosion. [16]
- 13 (a) Describe the main types of glaciers. [9]
- (b) Describe and explain the depositional features produced by glacial melt waters. [16]