ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Advanced Level

GEOGRAPHY 9156/1

PAPER 1

JUNE 2016 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.

The insert contains materials for use with Question 3(b), 6(b) and 11(a).

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 5 printed pages, 3 blank pages and an insert.

[Turn over

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, St Triashill Mission, Zimbabwe),

(a) draw a sketch map to show the main landforms and drainage features of the area. [8]

(b) describe the landforms and suggest their possible origins. [9]

(c) write an explanatory account of the drainage features of the area. [8]

2 You are required to investigate the nature of vegetation in a small area of approximately 3 km^2.

(a) Identify the vegetation characteristics you would investigate in the field. [4]

(b) **(i)** Explain how the information on vegetation characteristics could be collected in the field. [8]

(ii) How may the collected information be analysed and presented? [8]

(c) What other information would be required to gain a fuller understanding of the nature of vegetation in the area? [5]

Section B (Physical Core)

Answer **two** questions from this section.

3 **(a)** Define the terms *absolute humidity*, *specific humidity* and *relative humidity*. [6]

(b) Photograph A (Insert) shows types of clouds.

Describe and explain the conditions leading to the development of these clouds and the resultant weather phenomena. [12]

(c) Outline the influence of any **two** human activities on weather on a small scale. [7]

4 **(a)** Distinguish between drainage pattern and drainage density. [6]

(b) Using well-annotated diagrams, describe and explain the development of the following drainage patterns:

(i) dendritic,

(ii) radial, and

(iii) rectangular. [12]

(c) How may the following factors affect the rate of incision of river bedrock?

(i) geology, and

(ii) isostatic movements. [7]

5 **(a)** Describe the terms *spring* and *aquifer*. [6]

(b) Describe and explain the factors which influence the form of stream hydrographs. [12]

(c) Briefly explain the factors which influence spring discharge. [7]

6 **(a)** Define the terms *sheet wash* and *heave* or *creep*. [6]

(b) Photograph B (Insert) shows a type of mass movement.

(i) Describe and explain the conditions that may lead to its occurrence.

(ii) How is slope form influenced by such mass movements? [12]

(c) With reference to a named area, assess the effectiveness of measures taken to stabilise slopes. [7]

7 (a) Define the terms *carbonation* and *chelation.* [6]

(b) Using examples of both physical and chemical weathering processes, explain how the rate of weathering can be influenced by the following factors:

(i) climate;

(ii) rock type and structure;

(iii) vegetation. [12]

(b) Assess the extent to which human activities can modify weathering processes. [7]

8 (a) Define the term *plant succession.* [6]

(b) Briefly outline the climatic characteristics of tropical grassland areas and show how the vegetation has been influenced by the prevailing soil and climatic conditions. [12]

(c) With reference to examples, explain how human activities have modified the vegetation of tropical grassland areas. [7]

Section C (Physical Options)

Answer **one** question from this section.

9 **(a)** Outline the theory of plate tectonics. [9]

(b) Show how the modern theory of plate tectonics can be used to explain the global distribution of volcanoes and fold mountains. [16]

10 **(a)** Which areas of the world, and for what reasons, are at most risk from hazardous mass movements? [9]

(b) With reference to examples, assess the extent to which these mass movements may be prevented. [16]

11 **(a)** Fig. 3 (Insert) shows the global distribution of the main hot deserts and some related causes.

Explain the location of the deserts shown. [9]

(b) With reference to examples, assess the extent to which human activities have been affected by the prevailing environmental conditions in hot deserts. [16]

12 **(a)** Describe and explain the development of the following coastal features:

(i) beaches,

(ii) cliffs, and

(iii) arches.

[9]

(b) With the aid of examples, evaluate measures which have been introduced to manage the degradation of coastal areas. [16]

13 **(a)** Define the term *permafrost* and explain the factors that influence its distribution. [9]

(b) With reference to examples, discuss the role of glaciation in the development of drainage features. [16]