PIONEER JUNIOR COLLEGE

Candidate Name: _____

CT Group / Index no: _____

GEOGRAPHY

9730/01

Paper 1

Monday, 08 September 2008

3 h

Additional Materials: **INSERT**

Writing Paper

READ THESE INSTRUCTIONS FIRST
Write your index number and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.

Section A
Answer **ALL** questions.

Section B
Answer **TWO** questions, each from a different topic.

You are advised not to spend more than 1 hour and 30 mins on Section A.
All the Figures referred to in the questions are contained in the question paper.
You should make reference to appropriate examples studied in the field or classroom, ever where such examples are not specifically requested by the question.
Sketch maps should be drawn whenever they serve to illustrate an answer.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

Questions Attempted	
Section A	**Marks**
1	/ 12
2	/ 12
3	/ 12
4	/ 14
Section B	**Marks**
	/ 25
	/ 25
Total	/ 100
Grade	

Section A

Answer all the questions in this section.
Questions 1, 2 and 3 carry 12 marks each and Questions 4 carry 14 marks.
You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

1. Figure 1 shows some forms of mass movement.

(a) Define the term '*mass movement*'. [2]

(b) Describe the differences between slide (slump), flow and creep as shown in Figure 1. [4]

(c) Explain the causes and the physical effects of two types of the mass movements shown in Figure 1. [6]

Atmospheric Processes, Hazards and Management

2. Figure 2 shows source regions of tropical air masses.

(a) Describe the characteristics of each type of air mass shown. [6]

(b) Explain how the passage of these air masses within tropical areas can affect weather. [6]

Hydrologic Processes, Hazards and Management

3 Figure 3 shows the hydrological cycle for a small river basin.

(a) Distinguish between '*infiltration*' and '*percolation*'. [2]

(b) Identify and briefly describe **TWO** stores shown in Figure 3. [2]

(c) With reference to the basin conditions shown in Figure 3, [8]

(i) explain how a river flood might occur and

(ii) describe **ONE** method of predicting such a flood.

Lithospheric and Atmospheric Processes, Hazards and Management

4. Figure 4 shows materials erupted from a volcano.

(a) (i) Define the term '*volcanic hazard*'. [4]

(ii) Identify the type of plate boundary that will produce the volcanic eruption found in Figure 4. Suggest reasons for your answers.

(b) From Figure 4, describe the nature of **lava flow** and **nuée ardente** and explain how they may be hazardous. [6]

(c) Explain how volcanic eruptions can affect weather. [4]

Section B

Answer **TWO** questions, each from a different topic. All questions carry 25 marks.

Lithospheric Processes, Hazards and Management

5 EITHER

(a) Study Figure 5 which shows latitudinal variations in the depth of weathering in relation to climatic variations. [9]

Account for the relationship shown between the depth of regolith and the climate.

(b) With reference to examples on one specific type of tectonic or geomorphological hazard, evaluate the attempts made to predict and limit its effects on the environment. [16]

OR

(a) Study Photograph A which shows a landform that has resulted from weathering of granite in the tropics. [9]

With the aid of diagram(s), explain the formation of this landform.

(b) With the aid of diagrams, explain to what extent can plate tectonic theory be used to account for the global distribution and formation of volcanoes, earthquakes and fold mountains? [16]

Atmospheric Processes, Hazards and Management

6 EITHER

(a) Study figure 6 which shows the cross-section of a tropical cyclone (hurricane). [9]

Describe the nature and development of tropical cyclone. Why are they considered hazardous?

(b) To what extent can tropical cyclones (hurricanes) be predicted? What measures can be taken to reduce their effects? [16]

OR

(a) With the aid of diagram(s), explain the concept of poleward flow of energy. [9]

(b) Explain the term '*climate change*'. To what extent are human activities responsible for climate change at micro (local) and macro (global) scale? [16]

Hydrologic Processes, Hazards and Management

7 EITHER

(a) Describe how overland flow occurs and explain the differences between 'hortonian overland flow' and 'saturation overland flow'. [9]

(b) With the aid of well annotated diagrams, describe and account for the formation of meandering and braided streams. [16]

OR

(a) Using simple sketch hydrographs, explain how a change in land use in a drainage basin from woodland to urbanization may affect river discharge. [9]

(b) To what extent are climate and vegetation the principal factors influencing the hydrological processes in a drainage basin? [16]