YISHUN JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2008

GEOGRAPHY **9730/01**
Higher 2 **22/08/2008, Friday**
0800-1100hrs

PAPER 1 PHYSICAL GEOGRAPHY 3 HOURS

Additional Materials: Writing Paper
World Outline Map
Insert

INSTRUCTIONS TO CANDIDATES

Write your Centre number, 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.
Do not use staples, paper clips, highlighters, glue or correction liquid.

Section A
Answer **all** questions.

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

The Insert contains all the Figures referred to in the question paper.
Diagrams and sketch maps should be drawn whenever they serve to illustrate an answer.
The world outline map may be annotated and handed in with relevant answers.
You are reminded of the need for good English and clear presentation in your answers.

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.

This document consists of **5** printed pages and **1** Insert.

Section A

Answer **four** questions from this section.

Questions 1, 2 and 3 carry 12 marks and Question 4 carries 14 marks.
You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

1 Fig. 1 shows the location of the Himalayas.

(a) Describe the tectonic location and setting of the Himalayas. [3]

(b) Explain the formation of the Himalayas. [5]

(c) Explain why earthquakes are associated with this boundary. [4]

Atmospheric Processes, Hazards and Management

2 Fig. 2 shows the path taken by Hurricane Floyd as it approaches Georgia and the Carolinas.

(a) Describe the path of Hurricane Floyd. [2]

(b) Define 'hurricane' and explain the formation of a hurricane. . [6]

(c) Describe the impact of the hurricane on coastal areas. [4]

Hydrologic Processes, Hazards and Management

3 Fig. 3 shows the water stores and flows in a drainage basin.

(a) Using the diagram, distinguish between the terms infiltration and percolation. [4]

(b) Explain how the river discharge reaches the channel. [5]

(c) Using fieldwork techniques you have studied, how would you measure the velocity of flow in the river channel? [3]

Lithospheric Processes and Hydrologic Processes, Hazards and Management

4 Photograph A shows a river channel on the South Branch of the Potomac River in West Virginia. Fig. 4 shows some factors affecting processes operating on a slope.

(a) Draw a labeled diagram to identify the main features of the river channel and valley-side slopes represented in Photograph A. [5]

(b) Explain the connections between the river channel system and slope processes. [5]

(c) Briefly describe how two human activities can possibly affect slope processes shown in Photograph A. [4]

Section B

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

Lithospheric Processes, Hazards and Management

5 EITHER

(a) Fig. 5 shows the effects of the Soufriere Hills volcanic eruption in Montserrat. Describe and account for the hazardous effects of the eruption. [9]

(b) To what extent does climate play a role in affecting the weathering of granite and its resultant landforms? [16]

OR

(a) Compare the processes of chemical weathering and physical (mechanical) weathering. [9]

(b) To what extent can earthquakes be predicted and its effects reduced? [16]

Atmospheric Processes, Hazards and Management

6 EITHER

(a) Explain what is meant by the tricellular model, using diagram(s) to illustrate your understanding. [9]

(b) With reference to either droughts or tropical cyclones, to what extent can humans influence the causes and management of atmospheric hazards? [16]

OR

(a) Using concepts of atmospheric stability and lapse rate, explain the formation of precipitation in tropical and equatorial regions. [9]

(b) Discuss how and why climates of urban areas differ from that of the surroundings. [16]

Hydrologic Processes, Hazards and Management

7 EITHER

(a) Explain why river valleys show great variation in terms of form and shapes. [9]

(b) "Humans have a profound impact on the hydrology of a river." To what extent do you agree with this statement? [16]

OR

(a) Explain how the processes of erosion, transportation and deposition relate to the formation of meanders and braided rivers. [9]

(b) Evaluate the factors which cause changes in channel discharge and velocity along the course of a river and also at different times of the year. [16]