MERIDIAN JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION 2013
Higher 2

H2 Geography 9730/01

Paper 1 Physical Geography **19 Sep 2013**

3 Hours

Additional Materials: Answer Paper
1 Insert
World Outline Map

READ THESE INSTRUCTIONS FIRST

Write your name, civics group and index number 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 fluid.

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

Diagrams and sketch maps should be drawn wherever 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.

Start each question on a fresh sheet of paper.
At the end of the examination, fasten this **cover sheet** and all your work securely together in **chronological order**.
The number of marks is given in the brackets [ ] at the end of each question or part question.

This document consists of 4 printed pages.

Name: _____

Civics Group: _____

Index Number: _____

Qn no. (Section A)	Marks	Qn no. (Section B)	Marks
1		5 Either/ Or*	
2		6 Either/ Or*	
3		7 Either/ Or*	
4			
Total			

*Please **circle** the question number attempted and **delete** Either / Or accordingly

Section A

Answer **all** questions in 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 Photograph A shows a landslide.

(a) Draw a fully labelled diagram identifying the main features of the landslide shown in the photograph. [4]

(b) Account for the formation of the landslide shown. [4]

(c) Using evidence from Photograph A, explain 2 weathering processes operating in the area shown on the photograph. [4]

Atmospheric Processes, Hazards and Management

2. Fig. 1 shows the average annual distribution of incoming solar radiation (insolation) at the earth's surface. Insolation values are measured on a horizontal surface at ground level in watts/m^2.

(a) Describe the pattern of insolation shown in Fig. 1 [2]

(b) Give one reason why the solar radiation received at the equator is lower than that at the tropics. [2]

(c) Sketch the climograph for the area marked "X" in Fig. 1 and account for its precipitation characteristics. [8]

Hydrologic Processes, Hazards and Management

3. Fig. 2 shows some features associated with the valley of a river channel.

(a) Explain how the river shown in Fig. 2 develops from a straight to a meandering river. [6]

(b) Briefly describe how you would carry out primary fieldwork to study the variation in infiltration rates in a small drainage basin. [6]

Lithospheric and Hydrologic Processes, Hazards and Management

4. Fig. 3 shows the changing levels of the water tables in an area and the location of two valleys.

(a) Identify (with justification) the type of river found in Valley B. [2]

(b) Explain how water reaches, is stored in and removed from the water table. [6]

(c) Explain how the nature of mass movements are likely to differ between Valley A and Valley B. [6]

Section B

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

Lithospheric Processes, Hazards and Management

5 Either

(a) Explain the role of geology in affecting the movement and stability of slopes. [9]

(b) To what extent are the impacts of mass movements similar? [16]

5 Or

(a) Using one or more diagrams, explain the development of a divergent plate boundary and its associated landforms. [9]

(b) Discuss the extent to which the impacts of earthquakes are related to the level of development of the country affected. [16]

Atmospheric Processes, Hazards and Management

6 Either

(a) Explain the Earth's energy budget and radiation balance. [9]

(b) With reference to specific examples, examine the challenges faced by authorities in trying to manage the hazards posed by tropical cyclones. [16]

6 Or

(a) Explain how scientists have been able to establish the climatic characteristics of the past. [9]

(b) To what extent do you agree that desertification is a result of human activity? [16]

Hydrologic Processes, Hazards and Management

7 Either

(a) Examine the factors that influence the amount of water reaching the groundwater store and the time it takes. [9]

(b) Critically evaluate the success of different strategies used to manage conflicts of interest between riparian communities. [16]

7 Or

(a) Fig. 4 shows the Bradshaw Model.

Describe and explain the relationship between channel morphology and river velocity. [9]

(b) To what extent do you agree that the impacts of flooding are determined by the intensity of rainfall? [16]

END OF PAPER