MERIDIAN JUNIOR COLLEGE
PRELIMINARY EXAMINATION
Higher 2

H2 Geography 9730/01

Paper 1 Physical Geography **16 Sept 2015**

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 5 printed pages and 1 blank page.

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 1 shows a road in the **limestone** region of Warren County, Kentucky, that collapsed on February 25, 2002.

(a) Briefly describe the characteristics of limestone and how it influences the chemical weathering of limestone. [3]

(b) Provide a geomorphological account for the collapse of the road. [6]

(c) Briefly explain the formation of limestone pavements. [3]

Atmospheric Processes, Hazards and Management

2. Figs 1A and 1B show the position of the Inter Tropical Convergence Zone (ITCZ) and the mean pattern of surface winds in January and July respectively.

(a) Explain what is meant by the term ITCZ. [4]

(b) Location X is at 10°N 0°E. Describe and account for the changes in the pattern of rainfall experienced by location X in a year. [8]

Hydrologic Processes, Hazards and Management

3. Fig. 2 shows the drainage basin of the Rhone River in Europe and the river regime at selected locations along the river.

(a) Describe the possible differences in channel morphology between Scion and Beaucaire. [4]

(b) Give 1 reason why the shapes of the 2 hydrographs at Lyons (Saone and Rhone) are different. [2]

(c) Describe the steps you would take to obtain the values of discharge for the River Rhone at Scion. [6]

Lithospheric and Hydrologic Processes, Hazards and Management

4. Fig. 3 shows some factors affecting processes operating on a slope.

(a) Account for the overland flow likely to be experienced at locations A and B. [6]

(b) Using the factors shown in Fig 4, explain the influence of climate on slope stability. [8]

Section B

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

Lithospheric Processes, Hazards and Management

5 Either

(a) Provide an account of the evidence for the plate tectonics theory. [9]

(b) To what extent can the variety of granite landforms be attributed to the characteristics of the rock? [16]

5 Or

(a) Explain how cockpit karst and tower landscapes may have formed. [9]

(b) With reference to specific examples, critically evaluate the effectiveness of strategies that have been employed to reduce the impacts of earthquakes. [16]

Atmospheric Processes, Hazards and Management

6 Either

(a) Explain the difference between the day and night time energy budget. [9]

(b) Discuss the extent to which latitude is responsible for temperature variations between different places in the world. [16]

6 Or

(a) With the aid of diagram(s), describe the causes and characteristics of tropical cyclones. [9]

(b) To what extent do you agree that excesses of rainfall are preferable to drought? [16]

Hydrologic Processes, Hazards and Management

7 Either

(a) With the aid of a diagram or diagrams, explain the influence of relief and climate on overland flow in a drainage basin. [9]

(b) Critically evaluate the view that the variety of channel patterns is attributed to conditions outside the channel rather than those within the channel. [16]

7 Or

(a) Explain how Hjulstrom's curve may be used to explain the differences in river processes between upstream and downstream locations along a river. [9]

(b) With reference to one or more examples, assess the success of strategies adopted to manage the impacts of flood hazards in both DCs and LDCs. [16]

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