



**JURONG JUNIOR COLLEGE
JC2 GEOGRAPHY
PRELIMINARY EXAMINATIONS 2013**

GEOGRAPHY

9730/01

Higher 2

Paper 1

Thursday 29 August 2013

3 hours

Name: _____

Class: _____

INSTRUCTIONS TO CANDIDATES

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use paper clips, highlighters, glue or correction fluid.

Section A

Answer **all** questions.

Section B

Answer **two** questions.

Diagrams and sketch maps should be drawn whenever they serve to illustrate an answer.

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.

Please attach your answers to the cover page provided.

Section A

Answer **all** the 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 limestone cavern in Stanton, Missouri, USA.
Figure 1 shows an illustration of joints within limestone bedrock.
- (a) Identify the features labelled 'A' and 'B' in Photograph A. [2]
 - (b) With reference to Figure 1, explain the role of joints in the formation of a limestone cave system. [4]
 - (c) Other than the role of joints, explain other pre-requisite conditions required for the formation of karst features in tropical regions. [6]

Atmospheric Processes, Hazards and Management

- 2 Figure 2 shows a sketch diagram of the urban heat island profile in Singapore
- (a) With reference to Figure 2, describe the midnight temperature changes of the Singapore from the CBD to the outlying areas. [4]
 - (b) With reference to your answer in (a), account for the differences in temperatures from the CBD and the outlying areas. [4]
 - (c) Describe and explain the conditions in which are most conducive for the development of the urban heat island effect in cities around the world. [4]

Hydrologic Processes, Hazards and Management

- 3** Photograph B shows a river in an upstream area.
- (a)** Identify the features labelled 'X' and 'Y' in Photograph B. [2]
 - (b)** Describe and explain the main channel processes operating in the river. [4]
 - (c)** Describe how you would conduct fieldwork to measure infiltration rates and outline the difficulties you might encounter. [6]

Atmospheric Processes, Hazards and Management & Lithospheric Processes, Hazards and Management

- 4** Figure 3 shows a map tracing the path of Typhoon Morakot (2009) which crossed the South China Sea in August 2009. Photograph C (Insert) shows the occurrence of mass movement process in Southern Taiwan after Typhoon Morakot.
- (a)** With reference to Figure 3, describe the path and account for the strength of Typhoon Morakot from 7th August 2009 to 11th August 2009. [6]
 - (b)** Describe and account for the occurrence of the mass movement shown in Photograph C. [4]
 - (c)** Describe how you would design a fieldwork studies to track weather conditions associated with Tropical Cyclones. [4]

Section B

Answer **two** questions from this section. Each question carries 25 marks.

Lithospheric Processes, Hazards and Management

- 5 **EITHER** (a) With the aid of diagrams, account for the formation of tectonic landforms found at convergent plate boundaries. [9]
- (b) With reference to case studies, discuss the extent to which accurate prediction will result in the effective management of volcanic hazards. [16]
- 5 **OR** (a) Describe and account for the characteristics of tectonic landforms found at divergent plate boundaries. [9]
- (b) Describe the landforms commonly found in regions of granite, and discuss the factors that may have contributed to their formation. [16]

Atmospheric Processes, Hazards and Management

- 6 **EITHER** (a) Describe and explain the human and natural causes of droughts. [9]
- (b) 'The climatic conditions of an area is very much determined by the latitude of the area.' Discuss the validity of this statement. [16]
- 6 **OR** (a) Compare and contrast the locations and characteristics between a Tropical rainforest climate (Af) and a Subtropical Desert climate (BWh). [9]
- (b) Discuss the effectiveness of strategies used to combat the effects of Global Warming. [16]

Hydrologic Processes, Hazards and Management

7 EITHER (a) Outline the factors that influence drainage density and discuss its usefulness as a flood prediction indicator. [9]

(b) “Economic Interest is paramount as compared to social and environmental sustainability at the heart of transborder conflict management.”

Discuss the validity of this statement with reference to examples you have studied in transborder conflict management. [16]

7 OR (a) With the aid of a diagram, explain why storm hydrographs may differ. [9]

(b) Discuss how fluvial processes are responsible for the differing channel morphologies. [16]

**** END OF PAPER ****