

**CATHOLIC JUNIOR COLLEGE**  
**In preparation for**  
**General Certificate of Education Advanced Level**  
**Higher 2**

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**GEOGRAPHY**  
Paper 1 Physical Geography

**9730/01**  
2 September 2013  
3 hours

Additional Materials: Answer Booklet/Paper  
Data Inserts  
World Outline Map

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**READ THESE INSTRUCTIONS FIRST**

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.

Write your class 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 fluid.

**Section A**

Answer **all** questions.

**Section B**

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

Data Inserts contains all Photographs, Table and 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, you are to hand in **each question separately**.

The number of marks is given in brackets [ ] at the end of each question or part question.

**Start each question on a fresh sheet of paper. You will hand in each question separately.**

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This document consists of 4 printed pages.

[Turn over]

## **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. Figure 1A shows some geomorphic features associated with landslides. Figure 1B shows factors that affect the risk of mass movements.
  - (a) Compare the characteristics of debris flow and slump. [4]
  - (b) Explain two hard measures that can be taken to prevent any two of the mass movements shown in Fig. 1A. [4]
  - (c) With reference to Fig. 1B, explain how geological factors can affect slope stability. [4]

### **Atmospheric Processes, Hazards and Management**

2. Figure 2 shows the climographs of New Delhi, Niamey and Ho Chi Minh City.
  - (a) Compare the climatic characteristics of the three cities. [6]
  - (b) Account for the factors influencing the climate of the cities. [6]

### **Hydrologic Processes, Hazards and Management**

3. Figure 3A shows the location of Carlisle, a city in Northwest England. Figure 3B shows the areal extent of the flood which occurred on 8 January 2005. Figure 3C shows the hydrograph for River Eden near Carlisle in January 2005.
  - (a) With reference to Fig. 3C, describe how the discharge of River Eden responds to storm events in January 2005. [4]
  - (b) With reference to Fig. 3A-C, account for the 2005 flood. [4]
  - (c) Explain two hard measures that can be taken to prevent flooding in Carlisle. [4]

### **Lithospheric and Hydrologic Processes, Hazards and Management**

4. Figure 4A shows a stretch of a channel in an alpine mountainous area. Figure 4B shows a stretch of a channel in North Yorkshire, NE England.
- (a) Describe the bedload in Fig. 4A and Fig. 4B. [2]
  - (b) Explain why the nature of the bedload is different in both channels. [4]
  - (c) Suggest how you would select study sites and measure discharge of the channel in Fig. 4B. [8]

### **Section B**

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

### **Lithospheric Processes, Hazards and Management**

#### **5 EITHER**

- (a) Using diagrams, explain how the Plate Tectonics Theory can explain the formation of fold mountains and mid-oceanic ridges. [9]
- (b) Discuss the role of climate in affecting the development of limestone landforms. [16]

#### **5 OR**

- (a) Explain how different weathering processes can lead to block and granular disintegration. [9]
- (b) Hazards caused by earthquakes are largely preventable. To what extent do you agree with this statement? [16]

### **Atmospheric Processes, Hazards and Management**

#### **6 EITHER**

- (a) Explain why insolation levels vary across the world. [9]
- (b) "It is easier to manage tropical cyclones as they are more predictable hazards." Discuss the validity of this statement. [16]

#### **6 OR**

- (a) Explain the formation of monsoons and its effect on tropical climates. [9]
- (b) To what extent can human activities cause droughts? [16]

## **Hydrologic Processes, Hazards and Management**

### **7 EITHER**

- (a) Explain how channel form may be affected by variations in sediment size and load in the channel. [9]
- (b) The causes of floods are mainly due to natural factors. Discuss the validity of this statement in relation to examples. [16]

### **7 OR**

- (a) How would landuse and climate influence the hydrologic cycle at the basin scale? [9]
- (b) Building of dams create more socio-economic, political and environmental problems than benefits. How far do you agree with this view? [16]

**[END OF PAPER]**