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

GEOGRAPHY
9730/01

Paper 1 Physical Geography

22 August 2016
3 hours

Additional Materials: Answer Paper
1 Insert
World Outline Map

READ THESE INSTRUCTIONS FIRST

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 four** 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.

Indicate the questions attempted on the examination cover page provided and attach the cover page to Question 1.

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

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 the epicentre of the 2015 Gorkha (Nepal) earthquake. Figure 1B is an intensity map showing the affected areas in Nepal on April 25-26, 2015. Photograph A and B shows the damage to buildings and settlements.

(a) With reference to Figure 1B, describe the extent of damage of the Gorkha (Nepal) earthquake. [2]

(b) Using Figure 1A, identify the type of plate boundary responsible for the earthquake in Nepal and suggest how the earthquake was generated. [4]

(c) Using Figure 1B, Photograph A and Photograph B, identify and explain possible factors that might have affected the intensity of damage caused by the Gorkha (Nepal) earthquake of 2015. [6]

Hydrologic Processes, Hazards and Management

2. Figure 2A shows the largest flood events on the River Thames at Kingston, a borough in Southwest London. Figure 2B shows the drainage basin of River Thames.

(a) Compare the hydrographs for the 1947, 1894 and 2014 floods. [4]

(b) Using Figure 2B, explain why London may be prone to floods. [6]

(c) Explain the impact that the 2014 flood may have on the natural environment. [2]

Atmospheric Processes, Hazards and Management

3. Figure 3A and 3B illustrates a place in the tropical rainforest (3A) and a place in a tropical desert (3B).

(a) With reference to Figure 3A and 3B, describe the differences between the two locations. [4] [4]

(b) Account for the temperature and precipitation patterns of both locations shown in the figures. [8]

Lithospheric, Hydrologic and Atmospheric Processes, Hazards and Management

4. West Bengal is a state located at the East of India at the western border of Bangladesh. Figure 4A shows the climograph of Kolkata and Figure 4B shows the atmospheric processes occurring during the Asian summer monsoon.

(a) With reference to Figure 4A which shows the climograph of Kolkata in West Bengal, identify the type of climate as shown and describe its climatic characteristics throughout the year. [5]

(b) With reference to Figure 4B, explain the effect of topography on precipitation patterns in West Bengal during the summer monsoon. [5]

(c) Describe and explain the possible hazards West Bengal might be exposed to due to such wind patterns. [4]

Section B

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

Lithospheric Processes, Hazards and Management

5 EITHER

(a) Explain why the nature of volcanic eruptions may vary globally. [9]

(b) With reference to case studies, discuss the extent to which the impacts of tectonic hazards are related to the level of economic development of the country affected. [16]

5 OR

(a) With the aid of diagrams, explain the processes responsible for the formation and development of tower karst. [9]

(b) Discuss how geology and climate influence the formation of a variety of granite landforms in tropical environments. [16]

Hydrologic Processes, Hazards and Management

6 EITHER

(a) Explain how human activities can affect flows and storages within the drainage basin. [9]

(b) “Flood management strategies often do more harm than good in mitigating floods.” Discuss the validity of this statement. [16]

6 OR

(a) With reference to a meandering or braided channel, explain how a river constantly changes its form in order to adjust to changes in the river energy. [9]

(b) "The upper riparian states will always have a greater say in the use and management of shared water resources in transborder river basins." To what extent do you agree with this statement? [16]

Atmospheric Processes, Hazards and Management

7 EITHER

(a) With the aid of diagrams, describe and explain the occurrence of seasons. [9]

(b) To what extent is the redistribution of the global energy budget driven primarily by atmospheric processes? [16]

7 OR

(a) With reference to examples, explain the natural and anthropogenic causes of droughts. [9]

(b) Discuss the extent to which the forecasting of tropical cyclones may help to reduce their impact. [16]

**** END OF PAPER ****