Candidate Name: _____ CT Group / Index no.: _____

PIONEER JUNIOR COLLEGE
JC 2 Preliminary Examination 2016

GEOGRAPHY 9730/01

HIGHER 2

Wednesday **14th September 2016** **3 hrs**

INSTRUCTIONS TO CANDIDATES

Write your **name**, **CT Group and index number** in the spaces provided on the cover sheet and submit it together with your answer scripts.

Section A
Answer **ALL** questions

Section B
Answer **TWO** questions

- The number of marks is given in brackets [ ] at the end of each question or part question.
- Sketch-maps and diagrams should be drawn wherever 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, attach the cover sheet to your answer script and fasten all your work securely together.

This question paper consists of 5 printed pages.
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Section A: Data Response Questions

Answer **all** the questions in this section
Questions 1, carries 14 marks, while Question 2, 3 and 4 carry 12 marks each.
You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

1 Fig. 1 shows the epicentre of the Chile Earthquake in February 2010, with a magnitude of 8.8. Fig. 2 shows the plate boundary of the Chile Earthquake. Fig. 3 shows the intensity of shaking and damage in the different cities of Chile Earthquake 2010.

(a) (i) Name the plate boundary and the tectonic plates of Chile Earthquake 2010. [2]

(ii) With reference to Fig. 2, explain the occurrence of earthquake in Chile at this plate boundary. [4]

(b) Describe and explain the distribution of the intensity of shaking and damage of the Chile Earthquake as shown in Fig. 3. [4]

(c) Explain two possible reasons that could have affected the hazard vulnerability of the Chile Earthquake. [4]

Atmospheric Processes, Hazards and Management

2 Fig. 4 shows an illustration outlining the inputs and outputs of CO_2. Fig. 5 shows the CO_2 level and the world population from 1960-2015.

(a) Briefly describe what Fig. 4 is trying to depict regarding CO_2 on earth. [3]

(b) (i) Describe the relationship between the level of CO_2 and the world population as shown in Fig. 5. [3]

(ii) Explain the relationship between the level of CO_2 and the world population as described in part b (i). [4]

(c) With reference to Fig. 4, explain a strategy that human can adopt to reduce the amount of CO_2 in the atmosphere. [2]

Hydrologic Processes, Hazards and Management

3 Fig. 6 shows the map of Columbia River that cuts across the political border between Canada and USA. Fig. 7 shows the annual hydrograph for the Columbia River in Canada.

(a) Describe the river regime of Columbia River as shown in Fig. 7. [3]

(b) With reference to Fig. 6 and 7, explain two possible reasons that can influence the river regime as described in (a) [4]

(c) Describe the methods you would use to study variations in infiltration rates on a slope in a temperate region. [5]

Lithospheric Processes, Hazards and Management, Hydrologic Processes, Hazards and Management, Atmospheric Processes, Hazards and Management

4 Fig. 8A and 8B show the conditions during the normal times and the El Nino times. Photograph A shows a river in Peru during the El Nino period in 2010.

(a) Describe the atmospheric circulation during both El Nino conditions and the normal conditions as shown in Fig. 8A and 8B. [4]

(b) Explain the impact of El Nino on the weather in the Pacific region. [4]

(c) Explain how El Nino can affect the slope and in turn affect the river as shown in Photograph A. [4]

This question paper consists of 5 printed pages.

Section B: Essay Questions

Answer **TWO** questions in this section.

Lithospheric Processes, Hazards and Management

5 Either

(a) Explain how instability can result in different types of mass movement. [9]

(b) To what extent do you agree that effective management of earthquakes is largely reliant on prediction methods? [16]

Lithospheric Processes, Hazards and Management

5 Or

(a) Explain the different weathering processes that result in granular and block disintegration. [9]

(b) With reference to **either** granite **or** limestone, discuss the role of weathering processes and erosion in the development of the resultant landforms. [16]

Atmospheric Processes, Hazards and Management

6 Either

(a) Explain the causes of global warming. [9]

(b) 'Success management of drought is dependent on a country's level of economic development.' [16]

To what extent do you agree with this statement?

Atmospheric Processes, Hazards and Management

6 Or

(a) With the aid of a diagram, explain the global atmospheric circulation. [9]

(b) To what extent do you agree that the seasonal movement of Inter-tropical convergence zone (ICZ) is responsible for the climate in the tropical climatic zones? [16]

This question paper consists of 5 printed pages.

Hydrologic Processes, Hazards and Management

7 Either

(a) With the aid of a diagram, describe the passage of water through a basin hydrological cycle. [9]

(b) To what extent do you agree that the management of flood hazards is difficult? [16]

Hydrologic Processes, Hazards and Management

7 Or

(a) Explain the influence of climate change in the formation of braided river. [9]

(b) Discuss the relative importance of the factors that influence the characteristics of the storm hydrographs. [16]

END OF PAPER