



National Junior College
SH2 Preliminary Examination 2016

GEOGRAPHY

8812/01

Higher 1

3 Hours
24 August 2016

READ THESE INSTRUCTIONS FIRST

Answer **four** questions from Section A.
Answer **one** question from Section B.
Answer **one** question from Section C.

At the end of the examination, fasten all your answer scripts securely together.
The number of marks is given in brackets [] at the end of each question or part question.
Insert contains all the Figures referred to in the question paper.
You are reminded of the need for good English and clear presentation in your answers.

This document consists of **6** printed pages, including this cover page.

Section A

Answer **all** the questions in this section.

Question 1, 2 and 3 carry 12 marks each, while Question 4 carries 14 marks.

You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

Question 1

Figs. 1A and 1B show information about an ash cloud following the eruption of an Icelandic volcano in 2010.

- (a) Using Figs. 1A and 1B, describe the nature and spread of the ash cloud. [4]
- (b) Explain why this type of plate boundary produces a cloud of volcanic ash. [4]
- (c) (i) Name the tectonic plate boundary on which Iceland is located. [1]
(ii) Name and explain the geological feature which separates the two plates. [3]

The Globalisation of Economic Activity

Question 2

Fig. 2A shows Singapore's key investments in China (as of 2014). Fig. 2B shows the trends in trade between Singapore and China from 1990 to 2014.

- (a) Using Fig. 2A, describe the distribution of Singapore's key investments in China. [3]
- (b) Using Fig. 2B, describe and explain the trends in trade between Singapore and China from 2006 to 2010. [4]
- (c) You are an officer with the power to decide where to locate Singapore's next billion-dollar investment in China. Two sites – Fujian and Ningxia – have been proposed.

State for which site you would decide to grant permission to locate the next billion-dollar investment in China and briefly outline the reasons for your decision. [5]

Hydrologic Processes, Hazards and Management

Question 3 Either

Fig. 3A is a map showing the characteristics of the drainage basins of Clapham Beck and Austwick. Figs. 3B and 3C are storm hydrographs of Clapham Beck and Austwick, following the same storm.

- (a) Contrast the hydrographs shown in Figs. 3B and 3C. [4]
- (b) Use Fig. 3A to explain the contrasts between the hydrographs shown in Figs. 3B and 3C. [4]
- (c) How useful is river velocity in helping to determine the flood risk of each of the two rivers in Fig. 3A? [4]

Urban Issues and Challenges

Question 3 Or

Photograph A shows an aerial view of land use in part of Bangkok, Thailand.

- (a) Using Photograph A,
 - (i) identify the possible functional zone marked X on the photograph and describe its characteristics [3]
 - (ii) suggest **two** other pieces of information that you might need to confirm your identification; [2]
 - (iii) compare and contrast the land use in the functional zone you have identified in (a)(i) with that marked Y on Photograph A. [3]
- (b) Outline how the theory of bid rent might help to explain the **nature** and **location** of functional zones X and Y. [4]

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

Question 4 Either

Photograph B shows a river channel in a temperate country in Europe.

- (a) Identify the features D, E and F shown in Photograph B. [2]
- (b) Describe the characteristics of the river channel shown in Photograph B. [6]
- (c) Describe how the physical characteristics of granite impact on its weathering in an area with a temperate climate. [6]

The Globalisation of Economic Activity and Urban Issues and Challenges

Question 4 Or

Fig. 5 shows the locations of Vietnam-Singapore Industrial Parks (VSIP) in North Vietnam.

- (a) With reference to Fig. 5, briefly explain why VSIP Hai Phong might be a preferred location for heavy industrial activities. [2]
- (b) Suggest reasons why Vietnam and Singapore would embark on such state-to-state collaborations. [4]
- (c) State the urban process which could occur in Hanoi as a result of the continued growth of the VSIPs, and outline the possible consequences of this urban process on Hanoi. [4]
- (d) Explain how you might undertake fieldwork to investigate the nature of industrial activities in the VSIPs. [4]

Section B

Answer **one** question from this section.

Each question carries 25 marks.

You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

Question 5 Either

- (a) With the aid of a diagram, explain how the rock cycle can be used to explain differences between igneous, sedimentary and metamorphic rock. [9]

- (b) 'The properties of rocks like granite and limestone is a major factor that affect the nature and rate of weathering.'

To what extent do you agree with this statement? [16]

Question 5 Or

- (a) Describe the characteristics of earthquakes. Outline methods that can be used for the measurement and description of the magnitude of earthquakes. [9]

- (b) 'Hazard mapping is the most effective way of reducing the impact of earthquakes on the human environment.'

How far do you agree with this view? [16]

Hydrologic Processes, Hazards and Management

Question 6 Either

- (a) Explain how abstraction of water, building of dams and urbanization might have affected flows and stores of water within a drainage basin. [9]

- (b) To what extent is it best to work with nature in managing river floods than control them? [16]

Question 6 Or

- (a) Define terms: drainage density; stream order and bifurcation ratio. Explain how they may be used to describe the characteristics of a drainage basin. [9]

- (b) To what extent do you agree that braided and meandering channels are formed in very different locations? [16]

Section C

Answer **one** question from this section.

Each question carries 25 marks.

You should allocate your time accordingly.

The Globalisation of Economic Activity

Question 7 Either

- (a) Describe and explain the development gap experienced **within one** world region. [9]
- (b) Discuss the extent to which TNCs have a negative impact on the countries in which they operate. [16]

Question 7 Or

- (a) Explain the emergence of the new international division of labour (NIDL). [9]
- (b) In the UN list of Human Development Index (HDI) values for 188 countries in 2014, Norway, a DC in Europe, was ranked first with 0.944 and Niger, an LDC in Africa, was ranked last with 0.348.

Assess the usefulness of the HDI and of one or more other indicators which may be used to measure development. [16]

Urban Issues and Challenges

Question 8 Either

- (a) Describe the physical, economic and social impacts of re-imaging on the urban environment. [9]
- (b) “Public housing is the solution to housing problems in urban areas”.
How far do you agree with this statement? [16]

Question 8 Or

- (a) With the use of examples, describe the nature and location of the functions that be found in the central city (including the CBD). [9]
- (b) Evaluate the success of strategies used to manage congestion and pollution in urban areas caused by transport. [16]