



SERANGOON JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS 2016
Higher 1

GEOGRAPHY

8812/01

Thursday
15 Sep 2016
3 hours

Additional materials: Writing Paper
1 Insert

READ THESE INSTRUCTIONS FIRST

Write your name and civics group 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, highlighter, glue or correction fluid.

Section A

Answer **all** questions.

Section B

Answer **one** question in this section.

Section C

Answer **one** question in this section.

The Insert contains all the 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, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

Section A

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

Lithospheric Processes, Hazards and Management

- 1 Fig. 1 shows a schematic sketch of the rock cycle.
- (a) Identify **A** and **B** as shown in Fig. 1. [2]
- (b) Outline **two** differences in physical characteristics between sedimentary rocks and igneous rocks. [4]
- (c) Using Fig. 1, explain the role of plate tectonics in the rock cycle. [6]

Globalisation of Economic Activity

- 2 Fig. 2A shows China's exports and imports from 1995 to 2014. Fig. 2B and 2C reflect the composition of China's exports and imports, respectively, in 2014.
- (a) With reference to Figs 2A and 2B, cite evidence to show that China is a Newly Industrialising Economy (NIE). [4]
- (b) Using information from all the resources, suggest potential problems that China will face in a globalising economy. [5]
- (c) Provide **two** ways that the nature of China's exports may change in future. [3]

Hydrologic Processes, Hazards and Management

- 3 **EITHER** Fig. 3 depicts the Hjulstrom diagram.
- (a) With reference to Fig. 3:
- (i) Identify the largest size of material that can be eroded at the velocity of 100cm/s. [1]
- (ii) Describe what would happen to the material you have identified in (a) (i), when the velocity drops from 100cm/s to 10cm/s. [3]
- (b) Suggest one reason why critical erosion velocity is represented by a band rather than a single line. [2]
- (c) Explain the importance of critical erosion velocity in the transportation of the load within a river channel. [6]

Urban Issues and Challenges

- 3 OR** Fig. 4A shows Curitiba's Integrated Transit Network which sought to integrate transport and landuse in the city of Curitiba. Photograph A is a street view of Curitiba's road system.
- (a) Using Fig. 4A and Photograph A, describe the key characteristics of Curitiba's Integrated Transit Network. [4]
- (b) With reference to Fig. 4A and Photograph A, how does Curitiba's Integrated Transit Network help to reduce congestion in the city? [4]
- (c) Describe **two** other strategies that governments can adopt to reduce traffic congestion in rapidly growing cities. [4]

Lithospheric and Hydrologic Processes, Hazards and Management

- 4 EITHER** Fig. 5A shows the tectonic plates and the epicentre of the 2011 Tohoku, Japan earthquake. Fig. 5B shows the effects of the tsunami on the Kitakami river. The Kitakami river is the largest river in the Tohoku region.
- (a) Using Fig. 5A, comment on the nature of the plate boundary and plate movement leading to the 2011 Tohoku earthquake. [2]
- (b) With reference to Fig. 5B, describe and explain the effects of the tsunami on Kitakami river. [3]
- (c) Suggest the effects of earthquakes on channel flow and morphology. [4]
- (d) Imagine that you are a government official working for the Japanese Seismic Research Centre. Discuss how you would map an earthquake hazard map for Japan. [5]

Globalisation of Economic Activities and Urban Issues and Challenges

- 4 OR** Fig. 6 shows the plan of the Gateway City Industrial Estate in Thailand. Toyota is a Japanese automotive manufacturer.
- (a) With reference to Fig. 6, explain why Toyota would choose to locate its manufacturing plants in the Gateway City Industrial Estate. [4]
- (b) Suggest the limitations of development zones in spurring development. [4]
- (c) Describe the methods you would use to investigate the nature of industrial activity in the outlined area labelled X shown in Fig. 6. [6]

Section B

Answer **one** question from this section. Each question carries 25 marks

Lithospheric Processes, Hazards and Management**5 EITHER**

- (a) With the aid of diagram(s), describe and explain the nature and location of tectonic activity along oceanic ridges. [9]
- (b) To what extent and why are earthquakes generally more hazardous events than volcanic eruptions? [16]

5 OR

- (a) Explain how the knowledge of the deep weathered profile helps one understand the development of granitic landforms. [9]
- (b) "Heaves produce small-scale effects on slopes whereas slides and flows produce large-scale effects." To what extent do you agree with this statement? [16]

Hydrologic Processes, Hazards and Management**6 EITHER**

- (a) With the aid of diagrams, explain the factors that may lead to rivers having flashy hydrographs. [9]
- (b) Explain how the development and form of channel patterns are a response to channel efficiency. [16]

6 OR

- (a) Describe the inputs and outputs of the drainage basin and explain their roles within it. [9]
- (b) To what extent are the conflicts of interest that operate within, or between riparian states largely environmental? [16]

Section C

Answer **one** question from this section. Each question carries 25 marks.

Globalisation of Economic Activity

7 EITHER

- (a) Describe and explain the growth of small and medium enterprises (SMEs) in the face of global economic change. **[9]**
- (b) To what extent has the recent introduction of new technologies led to changes in production and work across the globe? **[16]**

7 OR

- (a) How useful is the Human Development Index (HDI) as a measure of economic development? **[9]**
- (b) "Developing countries require trade, not aid, to alleviate poverty." To what extent do you agree with this statement? **[16]**

Urban Issues and Challenges

8 EITHER

- (a) Describe the physical, economic and social impacts of re-imagining on the urban environment. **[9]**
- (b) Discuss the extent to which bid-rent theory can be used to explain urban zoning in cities you have studied in both Developed Countries (DC) and Less Developed Countries (LDC). **[16]**

8 OR

- (a) Use examples to explain the processes of counter-urbanisation, sub-urbanisation and re-urbanisation in Developed Countries (DCs). **[9]**
- (b) "The social problems experienced by people in urban areas are similar in Developed Countries (DCs) and Less Developed Countries (LDCs)."
How far do you agree with this statement? **[16]**

How far do you agree with this statement?

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