



NANYANG JUNIOR COLLEGE

Preliminary Examination

H1 GEOGRAPHY

8812/01

Physical and Human Geography

10 September 2008

3 hours

Additional Materials: Answer Paper
 Insert
 World Outline Map

READ THESE INSTRUCTIONS FIRST

Write your class, index number 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 one question.

Section C
Answer one question.

The Insert contains the Photograph and all the Figures referred to in the question paper.
You should make reference to appropriate examples studied in the field or the classroom, even where such examples are not specifically requested by the questions.
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 carries 14 marks, and Questions 2, 3 and 4 carry 12 marks.
You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

- 1 Figs 1A and 1B show the relationship between climate variables and rates of physical weathering and chemical weathering respectively.
- (a) Describe briefly the main features of the two diagrams. [3]
 - (b) Why do the climatic factors that favour physical weathering appear to deter chemical weathering, and vice versa? [5]
 - (c) Suggest and explain two factors other than climate which affect the weathering of rocks. [6]

The Globalisation of Economic Activity

- 2 Fig. 2 shows Dell's global operations in 2001.
- (a) Describe the spatial pattern of Dell's operations as shown on Fig. 2. [3]
 - (b) What role does technology play in facilitating Dell's production system? [3]
 - (c) What other factors help to explain Dell's global operations? [6]

Hydrologic Processes, Hazards and Management

3 EITHER

Fig. 3 shows changes in channel properties from source to mouth in a drainage basin.

- (a) Describe the relationship between stream discharge and bed material grain size. [1]
- (b) Account for the change in bed material grain size downstream. [2]
- (c) The hydraulic radius is an integral part of stream study.
 - (i) Explain how it is calculated in the field. [3]
 - (ii) How would it change downstream and why? [2]
 - (iii) Show how it may differ in meandering and braided channels. [4]

Urban Issues and Challenges

3 OR

Fig. 4 shows two processes occurring within a large urban area in a DC.

- (a) Name the process shown by the dotted arrow on Fig. 4. [1]
- (b) Briefly explain why the filtering (lower income groups moving into better housing) shown in Fig. 4 may occur. [3]
- (c) Under what circumstances may newly-built housing be located within the existing urban area rather than on its outer edge? [4]
- (d) Define the term *homelessness*. Why is this issue still present in urban areas? [4]

Lithospheric and Hydrologic Processes, Hazards and Management

4 EITHER

Photograph A shows a section of a river channel and its valley side.

- (a) Draw an annotated field sketch of the photograph, highlighting the fluvial features and evidence of mass movement shown. [4]
- (b) (i) Suggest how the mass movement in Photograph A may have occurred. [4]
- (ii) What influence does the mass movement have on the processes taking place in the river as shown in Photograph A? [4]

The Globalisation of Economic Activity / Urban Issues and Challenges

4 OR

Fig. 5 shows a model of the post-industrial global city.

- (a) Describe the location of the low income residential areas shown in Fig. 5. [3]
- (b) Give two ways that the central city (CBD) may function as a 'Global Command Centre'. [2]
- (c) Suggest reasons for the decentralisation of the global city in Fig. 5. [7]

Section B Physical Geography

Answer one question from this section.

Lithospheric Processes, Hazards and Management

5 EITHER

The newspaper cutting in Fig. 6 reported a 7.2-magnitude earthquake that occurred in Japan in June 2008.

With reference to the newspaper cutting and/or other examples you have studied,

- (a) explain why some countries are more prone to earthquakes than others. [9]
- (b) describe and assess the success of strategies used to predict and mitigate the effects of earthquakes. [16]

OR

- (a) Show how the theory of deep weathering and exhumation can account for the formation of inselbergs. [9]
- (b) Using examples, and with the help of diagrams, explain how landforms are related to plate movements at (i) constructive plate margins and (ii) destructive plate margins. [16]

Hydrologic Processes, Hazards and Management

6 EITHER

- (a) What is *infiltration capacity* and what factors affect its rate across space and time? [9]
- (b) With reference to examples you have studied, show how shared water resources between states have led to tension and conflicts. Assess the effectiveness of measures that have been implemented. [16]

OR

- (a) With the aid of diagrams, explain the sequence of events leading to the formation and migration of meanders. [9]
- (b) With reference to an area you have studied, examine the issues that can arise as a result of channel management. [16]

Section C Human Geography

Answer one question from this section.

The Globalisation of Economic Activity

7 EITHER

- (a) Outline the differences between the terms *tertiary*, *quaternary* and *quinary*, as applied to the service sector of the economy and briefly account for their recent growth. [9]
- (b) With reference to examples, consider the extent to which the New International Division of Labour (NIDL) has been responsible for the global shift of economic activities in the last 15 years. [16]

OR

- (a) What are the locational characteristics of consumer and producer services? [9]
- (b) To what extent has globalisation resulted in the changing location of producer services? [16]

Urban Issues and Challenges

8 EITHER

- (a) What are the causes of rapid growth in cities in LDCs? [9]
- (b) With reference to an example or examples of urban areas, assess the relative importance of the factors which have influenced the urban structure. [16]

OR

Transport has become an issue as urbanisation has occurred across the globe.

- (a) Compare the nature of the problems of urban transport which have arisen in DCs and LDCs. [9]
- (b) Assess the success of the management strategies to reduce transport problems which have arisen in one or more urban areas. [16]