TEMASEK JUNIOR COLLEGE
PRELIMINARY EXAMINATION 2015

GEOGRAPHY **8812**
Higher 1 **September 2015**

3 hours

Additional Materials: **Insert with Figures, Colour Photographs and Diagrams**
World Outline Map

READ THESE INSTRUCTIONS FIRST

Write your name and CG on all the work you hand in.
Begin answers to each Question on a fresh sheet of paper.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use highlighters, glue or correction fluid.

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

At the end of the examination, fasten Physical Geography answers, both DRQs and essays, and Human Geography answers, both DRQs and essays, and hand them in separately.
The number of marks is given in brackets [ ] at the end of each question or part question.
Spend time according to marks allocated to questions.
All figures referred to in the question paper are in the Insert.
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.

This document consists of 7 printed pages

TEMASEK
JUNIOR COLLEGE

SECTION A

Answer **four** questions from this section
All questions carry 12 marks except questions 4 OR and 4 EITHER which carry 14 marks
You should allocate your time accordingly

Lithospheric Processes, Hazards and Management

1 Fig. 1A shows the tectonic setting of Japan.
Fig. 1B shows the epicentre of the 2011 Tohoku Earthquake and its intensity in parts of Japan.
Fig. 1C is an excerpt of a news article about the Tohoku Earthquake.

1 (a) What is meant by the "Modified Mercalli Intensity" as shown in Fig. 1B? [2]

1 (b) Describe and explain the pattern of earthquake intensity shown in Fig. 1B. [3]

1 (c) Explain how the tsunami mentioned in Fig. 1C was generated and suggest ways in which the impacts of tsunamis can be mitigated. [7]

The Globalisation of Economic Activity

2 Fig. 2A and 2B show foreign direct investment (FDI) into China for 1992 and 2006 respectively.

2 (a) With reference to Fig. 2A and 2B, describe the changes in FDI into China between 1992 and 2006. [3]

2 (b) With reference to examples, explain why TNCs may be interested to invest in LDCs such as China. [5]

2 (c) Outline how FDI into China may not benefit unskilled Chinese workers. [4]

Hydrological Processes, Hazards and Management

3 Either
Fig. 3A shows how selected channel variables change in a downstream direction. Photograph 3B shows a stream channel.

3 (a) With reference to Fig. 3A,

(i) in which of the three zones would you expect the stream shown in Photograph 3B to be located? Suggest reasons for your choice.

(ii) explain why it is possible for average velocity to increase

downstream despite gradient becoming gentler. [4]

3 (b) With reference to Photograph 3B,

(i) comment on the drainage density of the area shown In the photograph and;

(ii) suggest the stream order you would assign the channel, justifying your choice. [4]

3 (c) Explain how drainage density and stream order of a drainage basin affect its drainage efficiency. [4]

Urban Issues and Challenges

3 Or

Fig. 3C shows data from 3 wards (small administrative areas) in the suburbs of London, a large city in the UK.

3 (a) The wards vary in character. Identify which is, giving your reasoning:

(i) An area rehousing people from the inner city

(ii) An area that developed with the building of railways 100 years ago

(iii) An upper-middle class area [6]

3 (b) Colliers Wood has a significant non-white population. Why do groups of immigrants tend to cluster in particular areas in cities? [6]

Lithospheric and Hydrologic Processes, Hazards and Management

4 Either

Fig. 4A shows a map of the Murray-Darling basin in Australia.
Fig. 4B shows the river regimes for the Murray-Darling River for recent years compared to the long-term average.
Fig. 4C shows the shortage of rainfall recorded in Australia between 2002 and 2010.
Fig. 4D shows water consumption in New South Wales.
Fig. 4E shows different aspects of a particular rock outcrop in Singapore.

4 (a) With reference to Fig. 4A,

(i) explain what is meant by the term *river regime*;

(ii) examine the extent to which total monthly flow of the Murray–Darling River between 2006 and 2008 differs from the long-term average. [4]

4 (b) Using the information provided in Figs. 4A – 4D,

(i) discuss some issues arising from the use of water in the Murray-Darling basin and;

(ii) suggest how catchment management can be improved. [6]

4 (c) Imagine you are an amateur rock enthusiast studying rocks in a local area and encounter the rock outcrop shown in Fig. 4E.

How would you determine the rock type it represents? [4]

The Globalisation of Economic Activity and Urban Issues and Challenges

4 Or

Fig. 4F shows the population change of a number of mega-cities between 1950 and 2030.

4 (a) What is a mega-city? [1]

4 (b) Compare the growth of Delhi with New York giving reasons for differences you observe. [5]

4 (c) Suggest why a mega city need not be a global city. [3]

4 (d) Describe how isoline maps may be drawn from pedestrian count data and used to delimit the CBD. [5]

SECTION B – PHYSICAL GEOGRAPHY

Answer **one** question from this section

Lithospheric Processes, Hazards and Management

5 Either

5 (a) With the aid of a diagram, explain the usefulness of Peltier's model in showing the relationship between climate and weathering. [9]

5 (b) Discuss the weathering processes which operate on granite. To what extent do these processes explain the formation and development of granite landforms in tropical and temperate areas? [16]

5 Or

5 (a) Fig. 5 shows a model of responses to the occurrence of natural hazards.

Apply the model to describe and explain the responses to a hazardous tectonic event that you have studied. [9]

5 (b) "The key to successful volcanic hazard mitigation lies in the effectiveness of governmental action."

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

Hydrologic Processes, Hazards and Management

6 Either

6 (a) With the aid of a diagram, explain how river velocity influences erosion, transport and deposition in an alluvial channel. [9]

6 (b) "Knowing the frequency, magnitude and time of occurrence of floods is critical to their successful mitigation."

To what extent is this statement valid? [16]

6 Or

6 (a) Compare the characteristics of:

(i) Pools and riffles;

(ii) Slip-off slope and river cliffs;

(iii) Point bars and mid-channel bars. [9]

6 (b) "Braided and meandering channels develop as a result of different channel processes."

To what extent is this statement valid? [16]

SECTION C – HUMAN GEOGRAPHY

Answer **one** question from this section.

The Globalisation of Economic Activity

7 Either

7 (a) Explain what is meant by the terms *headquarters*, *research and development centre*, and *branch plant* and explain why TNCs may locate these functions in different countries. [9]

7 (b) Evaluate whether NIEs have become more important than DCs in the global economy. [16]

7 Or

7 (a) Explain what is meant by the term '*outsourcing*' and outline the importance of outsourcing in the service sector. [9]

7 (b) "The power of even the biggest transnational corporations is nothing compared with that of governments."

(adapted from The Economist, 2001)

With reference to examples, evaluate how far governments have been able to promote economic development in countries. [16]

Urban Issues and Challenges

8 Either

8 (a) What are the main causes of traffic congestion in cities? [9]

8 (b) Evaluate the success of one or more urban regeneration schemes you have studied. [16]

8 Or

8 (a) Explain the reasons for decentralisation and re-urbanisation. [9]

8 (b) Discuss the extent to which the car can be controlled within cities. [16]

END OF PAPER

TEMASEK JUNIOR COLLEGE
PRELIMINARY EXAMINATION 2015

GEOGRAPHY **8812**
Higher 1 **September 2015**

3 hours

INSERT

READ THESE INSTRUCTIONS FIRST

This insert contains the figures referred to in the questions as well as the World Outline Maps

This document consists of 10 printed pages

TEMASEK
JUNIOR COLLEGE

FIGURE 1A & 1B FOR QUESTION 1

Figure 1a

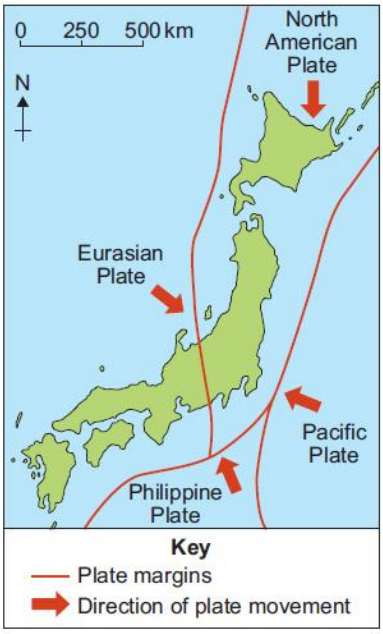


Figure 1b

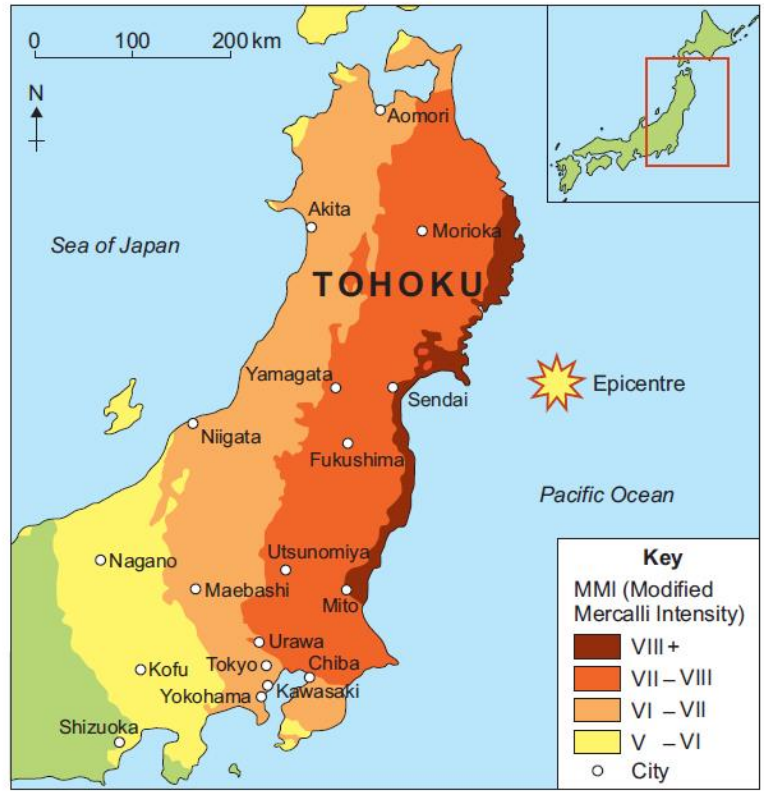


FIGURE 1C FOR QUESTION 1

Japan earthquake: Tsunami hits north-east

11 March 2011

Japan's most powerful earthquake since records began has struck the north-east coast, triggering a massive tsunami.

Cars, ships and buildings were swept away by a wall of water after the 8.9-magnitude tremor, which struck about 400km (250 miles) north-east of Tokyo.

A state of emergency has been declared at a nuclear power plant, where pressure has exceeded normal levels.

FIGURE 2A FOR QUESTION 2

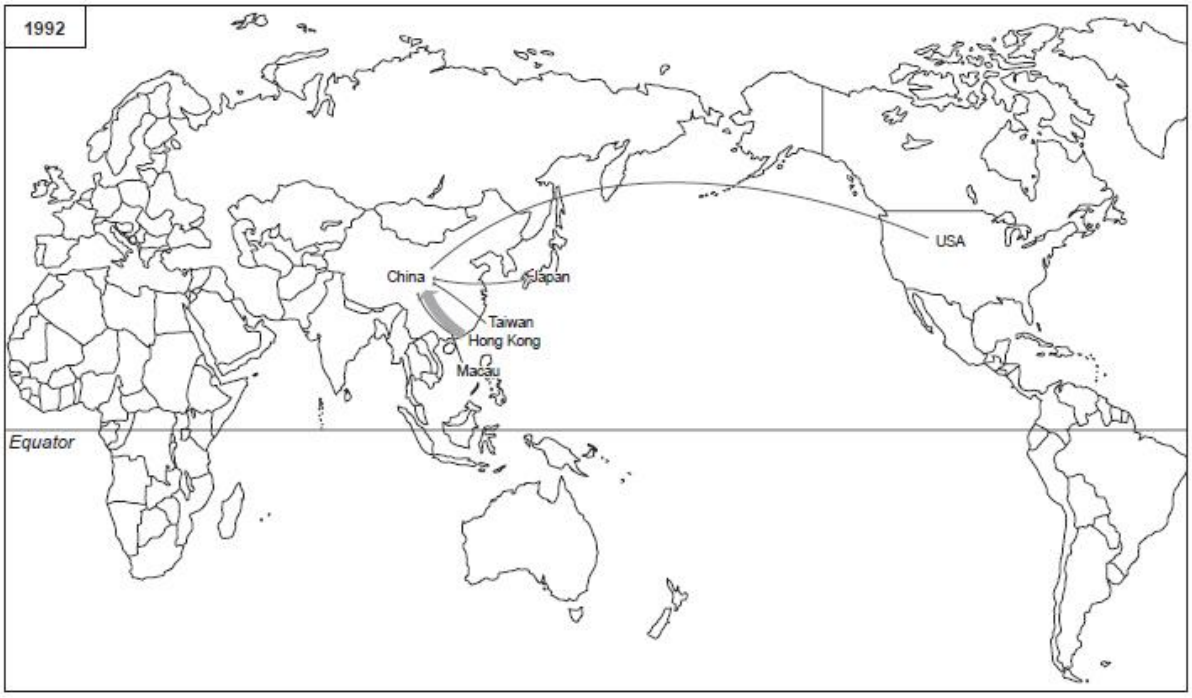
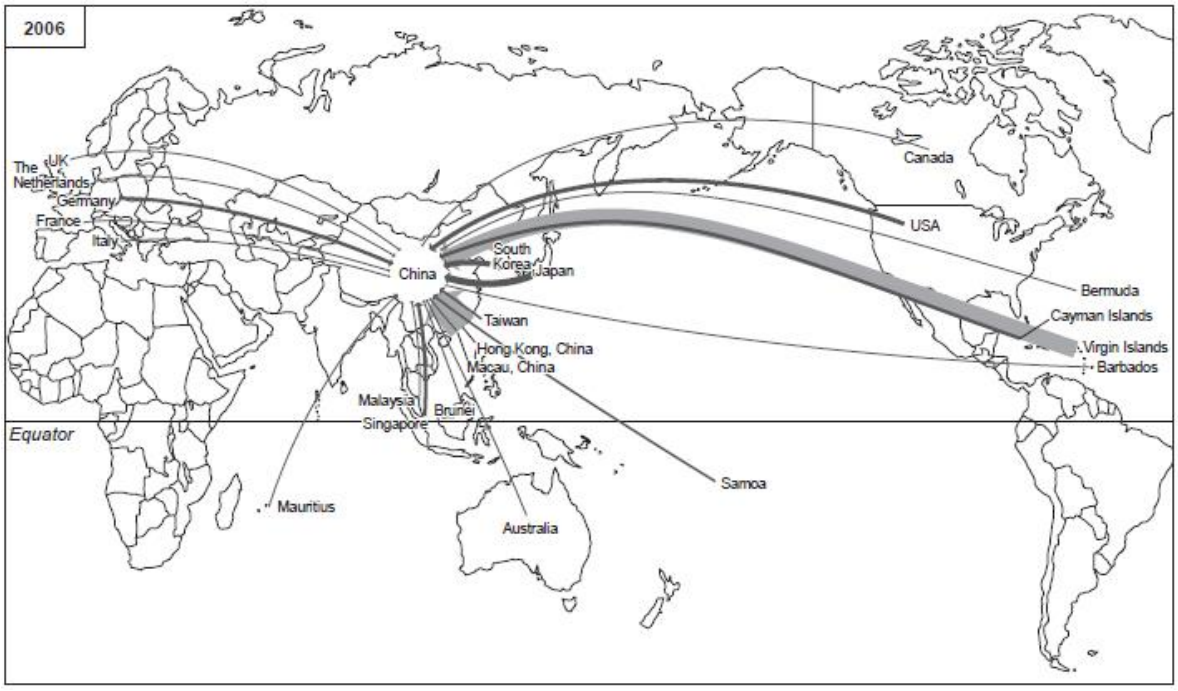


FIGURE 2B FOR QUESTION 2

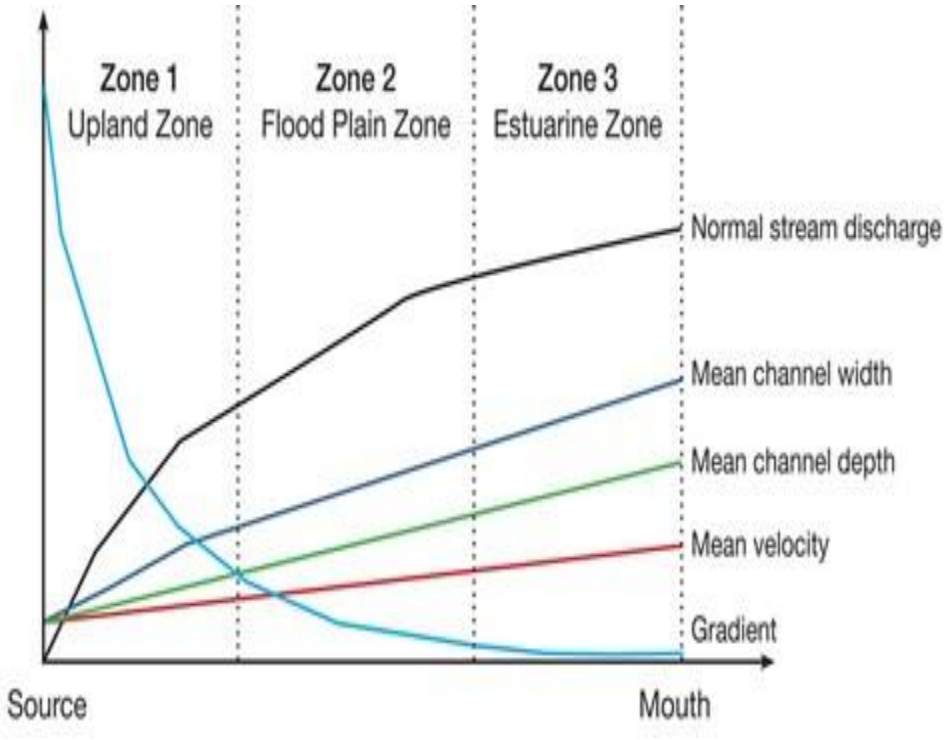


Key for 1992 and 2006

FDI (US$ billions)

20 10 5 1 0.5 0.2

FIGURE 3A FOR QUESTION 3 EITHER



PHOTOGRAPH 3B FOR QUESTION 3 EITHER

FIGURE 3C FOR QUESTION 3 OR

Indicator: 2001 census	Colliers Wood ward [%]	Surbiton Hill ward [%]	Becontree ward [%]
Population white	67.0	87.6	83.4
Average age	34.9	38.3	33.8
Unemployed	4.0	2.3	4.4
No car or van	39.7	27.4	35.9
Two or more cars or vans	14.4	23.8	17.2
Without central heating	13.0	10.0	11.7
Owner-occupied	60.7	66.9	57.5
Rented from Council	9.4	5.0	28.0
Qualified to degree level or higher	36.9	41.8	12.2
No qualifications	18.6	12.6	36.7

FIGURE 4A FOR QUESTION 4 EITHER

FIGURE 4B FOR QUESTION 4 EITHER

River regimes for the Murray-Darling river in SE Australia for recent years compared to the long-term average

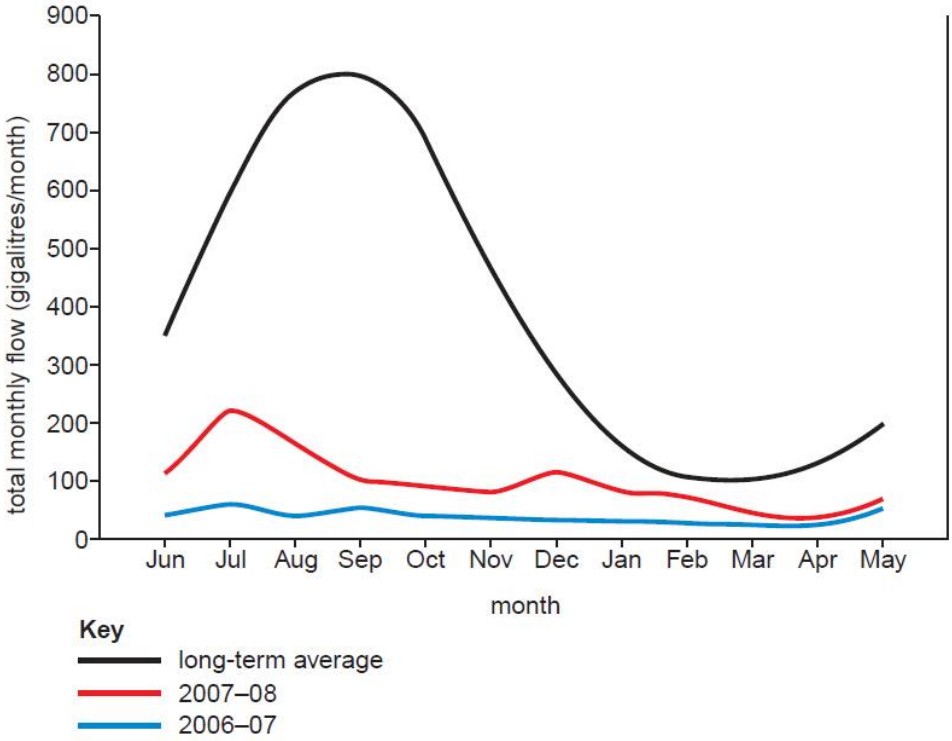


FIGURE 4C FOR QUESTION 4 EITHER

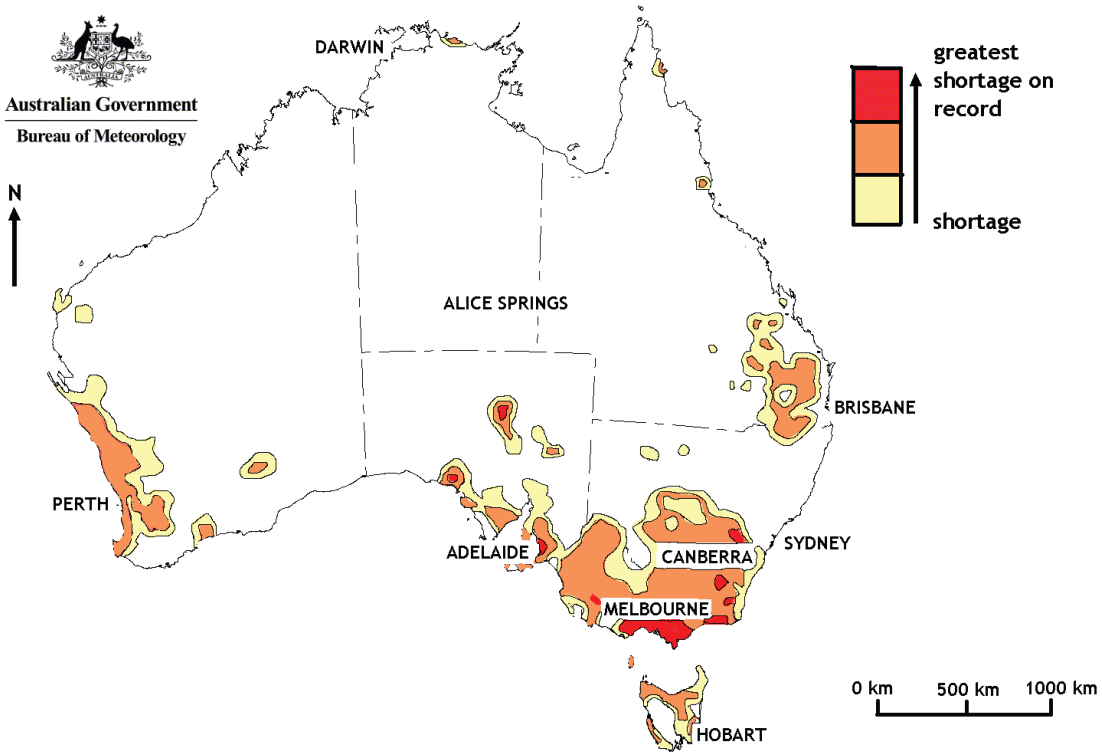


FIGURE 4D FOR QUESTION 4 EITHER

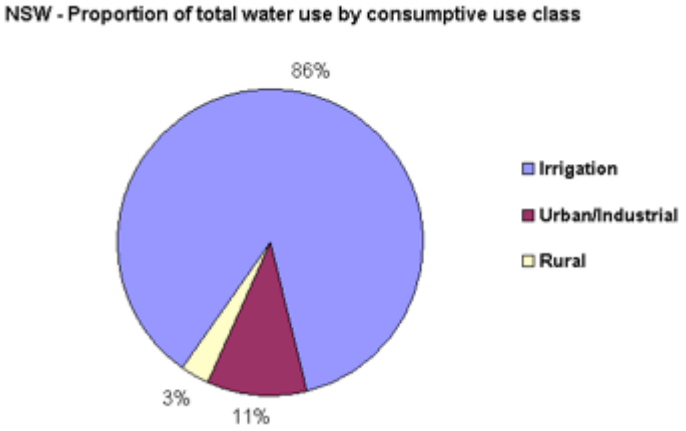
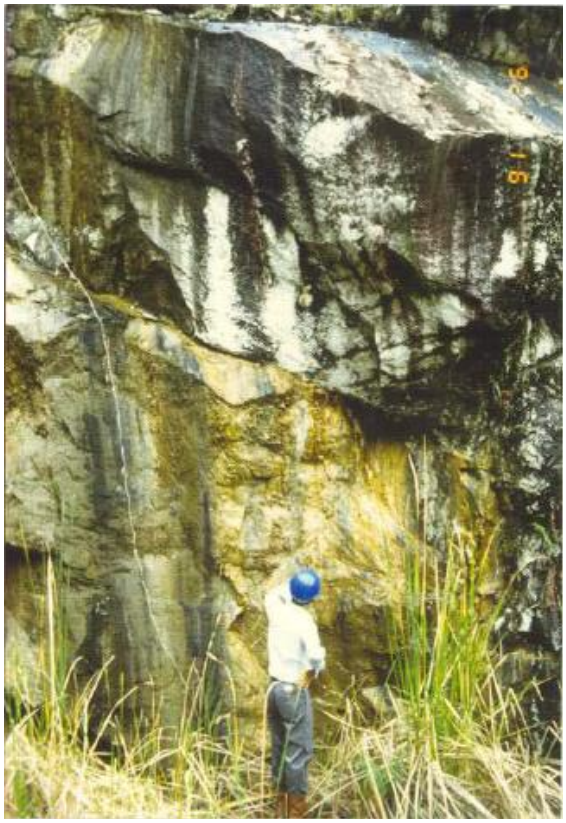


FIGURE 4E FOR QUESTION 4 EITHER



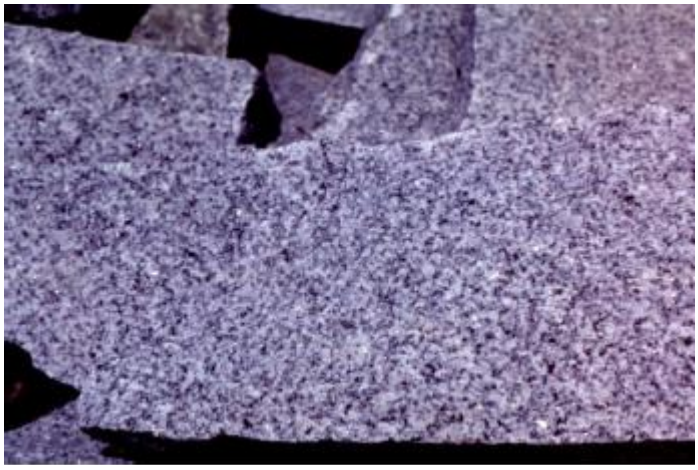


FIGURE 4F FOR QUESTION 4 OR

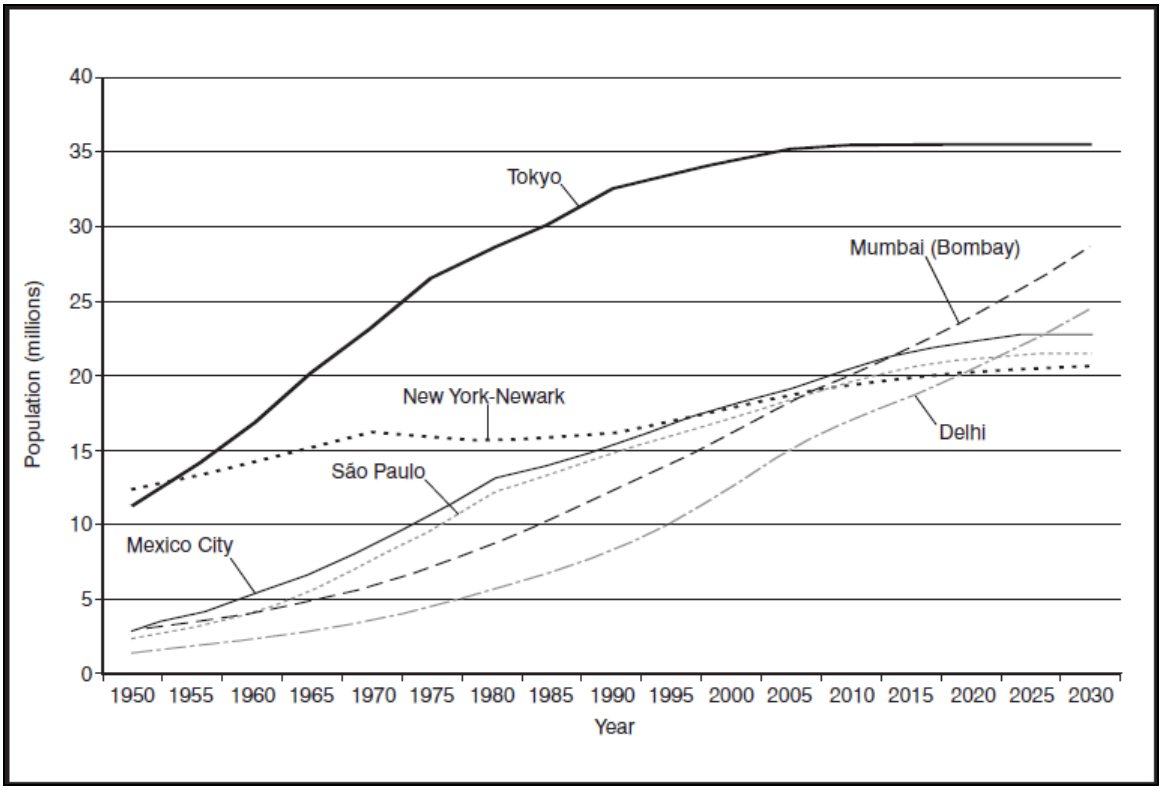


FIGURE 5 FOR QUESTION 5 OR