

RIVER VALLEY HIGH SCHOOL  
General Certificate of Education Advanced Level  
Preliminary Examination II  
Higher 1

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**GEOGRAPHY**  
**Paper 1**

**8812/01**  
**17 September 2014**  
**3 hours**

Additional Materials:      Answer Paper  
                                     3 Inserts  
                                     World outline map  
                                     Cover Page

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**READ THESE INSTRUCTIONS FIRST**

Write your name, admission number and class 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 **four** questions

**Section B**

- Answer **one** question.

**Section C**

- Answer **one** question.

You are advised not to spend more than one hour 30 minutes on Section A.  
The Insert contains all the Figures and the Photographs referred to in the questions.  
You should make reference to appropriate examples studied in the field or the classroom, even where such examples are not specifically required by the question.  
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 below the cover page securely together.  
The number of marks is given in brackets [   ] at the end of each question or part question.

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**This document consists of 6 printed pages and 3 Inserts.**



**[Turn over**

**Section A**

Answer **four** questions from this section.

**Lithospheric Processes, Hazards and Management**

- 1 Photograph A (Insert 2) shows a limestone cave in New Zealand.
- (a) On Insert 2, label the subsurface limestone features observed. Hand in Insert 2 with your answers. [3]
  - (b) Explain how limestone caves and **one** other subsurface limestone features observed in Photograph A can be formed. [6]
  - (c) Outline the steps you would undertake to distinguish sedimentary from metamorphic rocks. [5]

**Globalisation of Economic Activity**

- 2 Fig. 1A shows the share of agriculture, industry and services industry in India between 1950 to 2010. Fig. 1B shows the contribution of selected services to growth of total services in India.
- (a) Describe the changes in the share of agriculture, (manufacturing) industry and services contribution to India's GDP between 1950 and 2010. [2]
  - (b) Describe the largest changes in services observed in India and briefly account for this increase. [5]
  - (c) Discuss if the upward trend observed in (b) will continue in the near future. [5]

### Hydrologic Processes, Hazards and Management

- 3 EITHER** Fig. 2 (Insert 3) shows the drainage network of streams in Gaithersburg, Maryland, Washington D.C., adjacent to the Potomac River.
- (a) Using Insert 3, draw the approximate drainage divide of the sub-basin of Seneca Creek. A small part of Seneca Creek's drainage divide has already been drawn to help you start off. Hand in Insert 3 with your answers. [1]
  - (b) Using Strahler's method of stream ordering, label on Insert 3 the stream order of each segment of the sub-basin of Seneca Creek. State the stream order for the sub-basin. [3]
  - (c) How can the drainage density of a drainage basin such as that shown in Fig. 2 be calculated? Explain. [4]
  - (d) Describe how the river capacity and competence would change as Seneca Creek drains into the Potomac River. [4]

### Urban Issues and Challenges

- 3 OR** Fig. 3 shows the distribution of the 60 global cities in 2008 based on the Kearney Global Cities Index. Table 1 shows the ranking of the world's top 10 most liveable cities in 2008 based on the Liveable Cities Index compiled by Monocle (a magazine).
- (a) From Fig. 3, describe the distribution of the global cities in 2008. [2]
  - (b) With reference to Fig. 3 and Table 1:
    - i) Describe the relationship between the world's most liveable cities and the global cities. [1]
    - ii) Discuss whether the world's global cities are necessarily most liveable. [4]
  - (c) Evaluate the necessity for cities to adopt future forms of cities and the viability of cities developing themselves to becoming eco-cities. [5]

## **Lithospheric Processes, Hazards and Management and Hydrologic Processes, Hazards and Management**

- 4 EITHER** Fig. 4 shows the mean monthly rainfall and mean monthly discharge at selected sites in the Nile drainage basin. Table 2 shows the mean monthly discharge for two months at the Aswan Dam on the River Nile.
- (a)** On Fig. 4, complete the bar graph for the mean monthly discharge at the Aswan Dam. Hand in Fig. 4 with your answers. [1]
  - (b)**
    - i)** Describe the annual pattern of discharge at Khartoum. [3]
    - ii)** Explain why the annual pattern of discharge at Khartoum differs from that at the Aswan Dam. [4]
  - (c)** Briefly outline the ways in which freeze-thaw weathering and the weathering of limestone contribute to the transported load of a river. [4]

## **The Globalisation of Economic Activity and Urban Issues and Challenges**

- 4 OR** Fig. 5 is an infographic which shows the breakdown of the cost incurred when London hosted the Olympics in 2012. Textbox 1 and Textbox 2 show excerpts of the impacts of London's decision to host the Olympics.
- (a)** From Fig. 5, identify which area was allocated the largest budget and state the proportion of budget allocated to the identified domain. [2]
  - (b)** Discuss the extent to which organising such mega events are beneficial to host countries. [6]
  - (c)** Explain if the urban density gradient can differ between cities. [4]

## Section B: Physical Geography

Answer **one** question from this section.

### Lithospheric Processes, Hazards and Management

**5 EITHER (a)** Distinguish between the types of volcanoes and their associated volcanic eruptions found at different plate boundaries. [9]

**(b)** With reference to examples, assess the success of strategies in mitigating volcanic hazards employed by developed countries (DCs) and less developed countries (LDCs). [16]

**OR (a)** Describe the main characteristics of earthquakes and explain how earthquakes can be measured. [9]

**(b)** *“The consensus of the meeting was that individual earthquakes are probably inherently unpredictable”*

From: Earthquakes Cannot Be Predicted, in *Science*, 1997  
Authors: Geller et. al

To what extent do you agree that due to the unpredictability nature of earthquakes, it is impossible to mitigate earthquake hazards? [16]

### Hydrologic Processes, Hazards and Management

**6 EITHER (a)** Compare the conditions under which turbulent flow, laminar flow and helicoidal flow occur within river channels. [9]

**(b)** *“The downstream country, geographically a sort of ‘victim’ of the upstream country, has an extremely poor negotiating position”.*

Evaluate the validity of this statement with reference to case studies of transborder rivers. [16]

**OR (a)** Describe and explain two processes of fluvial erosion and explain the significance of critical erosion velocity in the erosional processes operating within a river. [9]

**(b)** *“Physical factors are more important than human factors in affecting the nature of storm hydrographs”.*

Discuss this view and critically evaluate measures that can be undertaken to manage the storm hydrograph. [16]

## Section C: Human Geography

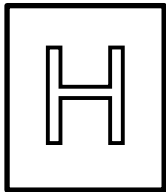
Answer **one** question from this section.

### Globalisation of Economic Activity

- 7    **EITHER**    (a)    Explain what is meant by *global shift* and what contributes towards this process. [9]
- (b)    With reference to examples, discuss if global shift has reduced the gap in the levels of development between DCs and LDCs in the past 60 years. [16]
- OR**            (a)    Explain what is meant by the following terms: *flexible production*; *multi-skilled production* and *job specialisation*. [9]
- (b)    “*The activities of transnational corporations (TNC) have lost a lot of their shine recently with respect to their contribution to development.*”
- From: The Impact of TNC Strategies on Development in Latin America and the Caribbean in *Overseas Development Institute*, 2003
- Author: Michael Mortimore
- To what extent is the statement true? Discuss with relevant examples. [16]

### Urban Issues and Challenges

- 8    **EITHER**    (a)    Explain how housing problems in both developed countries (DCs) and less developed countries (LDCs) can occur using relevant examples. [9]
- (b)    To what extent can DCs better mitigate the housing problems compared to LDCs? [16]
- OR**            (a)    With reference to examples, explain how the land-use patterns in different urban areas can be influenced. [9]
- (b)    “*A major objective of such redevelopment was that the city should adapt to changing economic realities... by ‘re-imaging’ itself as a city ripe for investment.*”
- From: Re-imaging the City, in *Geography*, 1996
- Author: Phil Hubbard
- Discuss if you agree that re-imaging of cities by public initiatives will necessarily lead to urban rejuvenation. [16]



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Insert 1

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### **READ THESE INSTRUCTIONS FIRST**

This insert contains all the Figures and Tables referred to in the questions.

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**[Turn over**

Fig. 1A for Question 2

## Share of Agriculture, (Manufacturing) Industry and Services in India

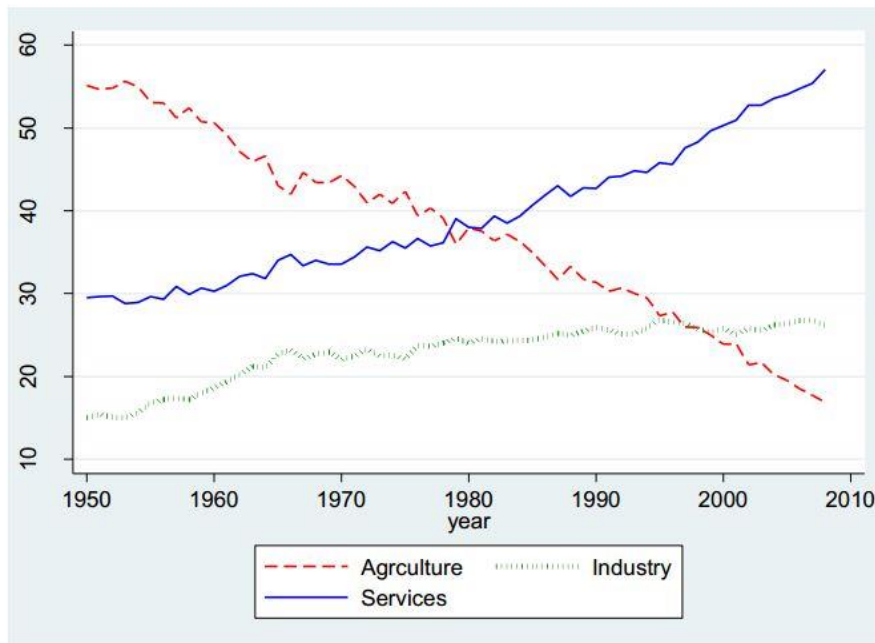


Fig. 1B for Question 2

## Contribution of selected services to total service growth in India

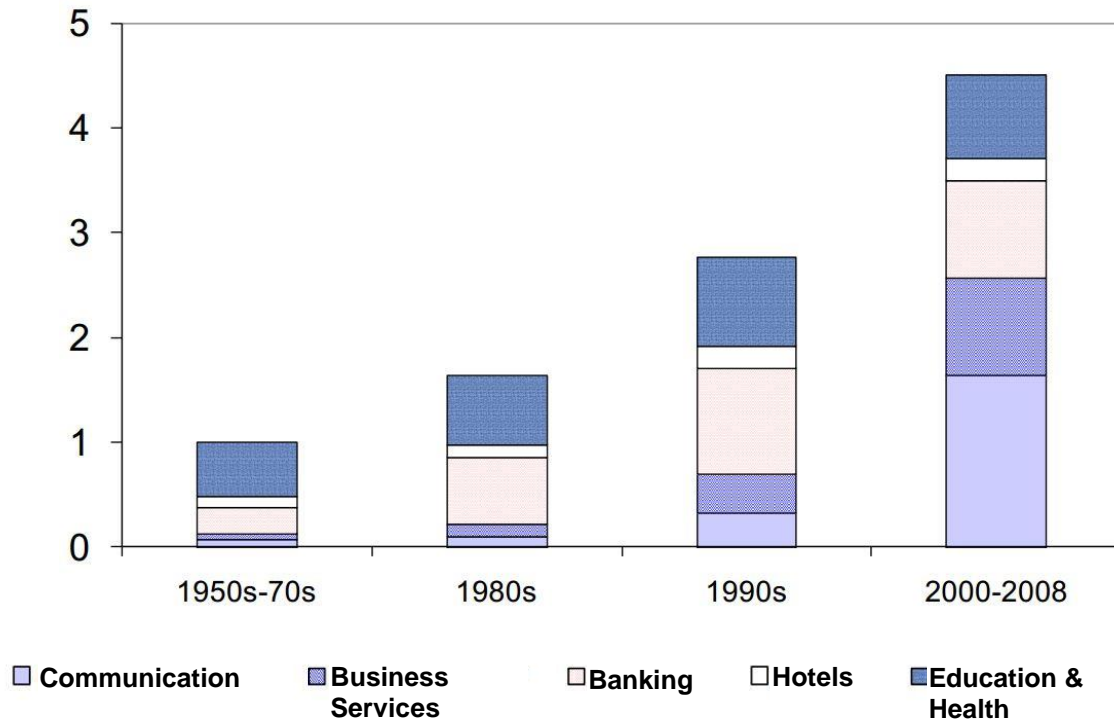




Fig. 3 for Question 3 OR

## Kearney Global Cities Index 2008

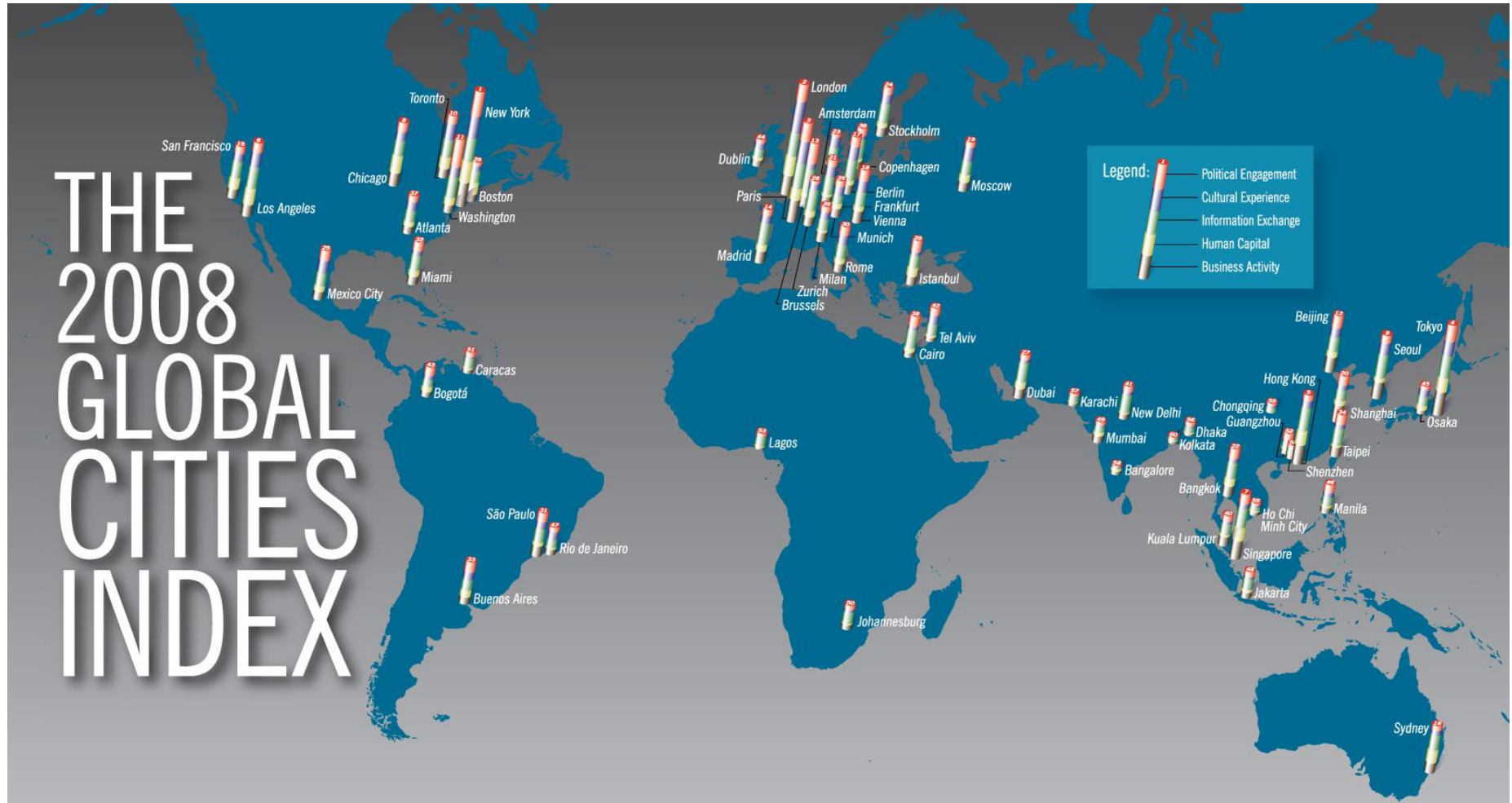
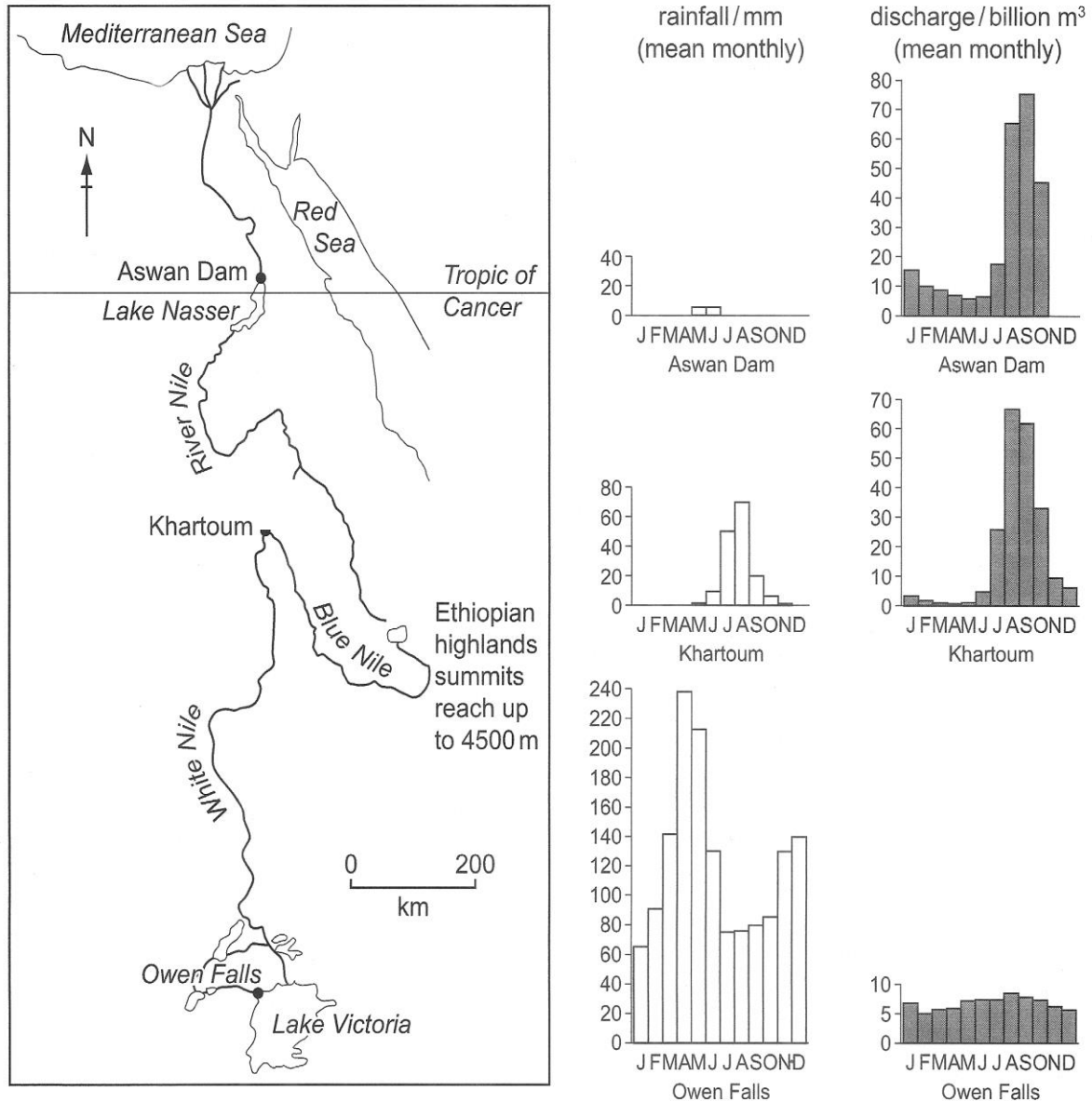


Table 1 for Question 3

**Monocle's Most Liveable Cities Index<sup>1</sup> 2008**

Position	City
1	Munich
2	Copenhagen
3	Zurich
4	Tokyo
5	Vienna
6	Helsinki
7	Sydney
8	Stockholm
9	Honolulu
10	Madrid

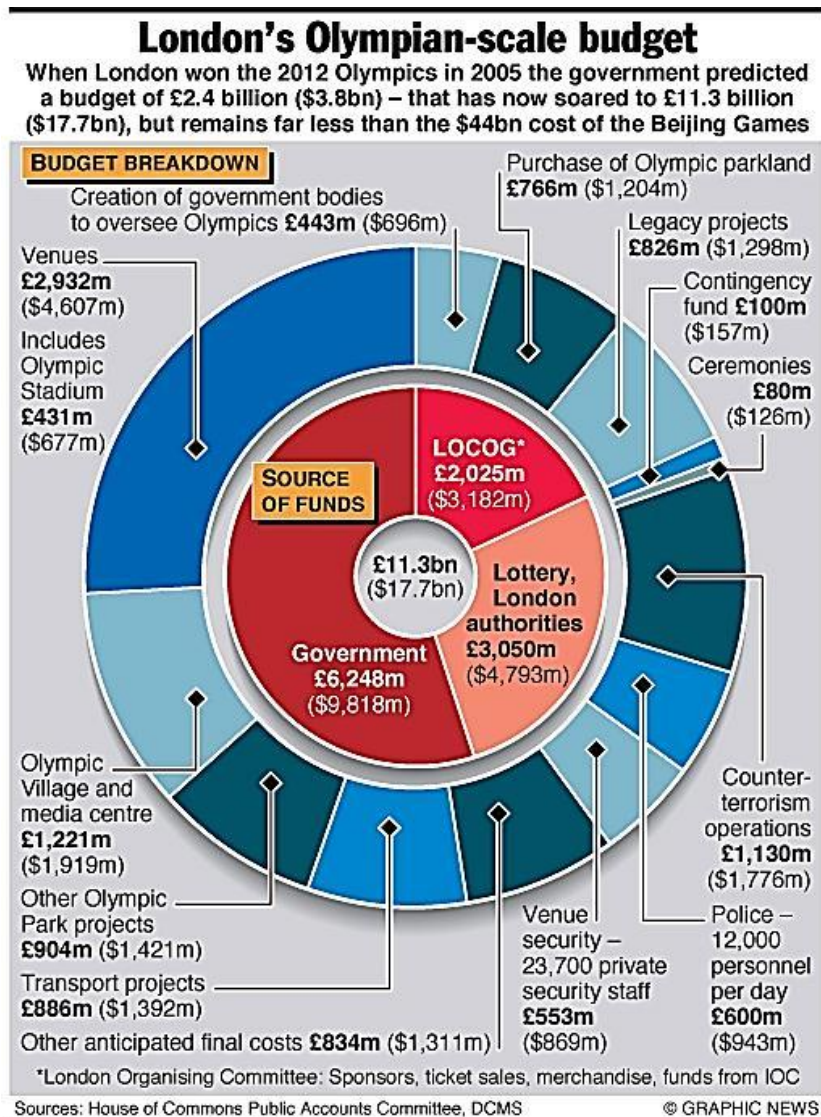
<sup>1</sup>The Most Liveable Cities Index is measured based on the following criteria: safety / crime, medical care, climate / sunshine, international connectivity, public transportation, quality of architecture, environmental issues and access to nature, urban design, business conditions, pro-active policy development and tolerance.

**Fig. 4 for Question 4 EITHER****Mean monthly rainfall and mean monthly discharge in the Nile drainage basin****Mean monthly discharge for the Aswan Dam on the River Nile****Table 2**

month	monthly flow (billion m <sup>3</sup> )
November	30
December	20

Fig. 5 for Question 4 OR

## Breakdown of London's budget for hosting the 2012 Olympics



**Textbox 1 for Question 4 OR****Selected public's opinion on London hosting the Olympics**

For some, the Games are a huge waste of public money. Originally estimated at a cost of £2.4bn, the budget had by 2007 ballooned to £9.3bn. Now that it looks likely to come in at just over £9.2bn, organisers are claiming that the Games are "on time and on budget".

"It's a colossal waste of dough," says Sam Leith, a columnist for the London Evening Standard. "Imagine a builder coming to your house, giving you a quote for £300, revising it to £1,500 and then saying it had come in under budget. You'd be outraged." If there was evidence to show that the Olympics boosted the host nation's economy then that might help. But this is not the case, Leith says.

**10 reasons some people will dread the Olympics**

**<http://www.bbc.com/news/magazine-17525402>**

**Textbox 2 for Question 4 OR****Opinion by Prime Minister on London hosting the Olympics**

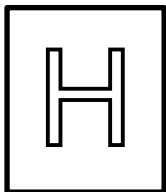
The UK economy has seen a £9.9bn boost in trade and investment from hosting the 2012 London Olympic and Paralympic Games, research suggests. Prime Minister David Cameron said "a lot of deals were done" around the time of the Olympics. The report, for the UK Trade and Investment department (UKTI), said the Olympics resulted in:

- £2.5bn "additional inward investment", 58% of which was outside London
- £5.9bn additional sales following Olympic-related promotions by the Foreign Office and UKTI
- £1.5bn high value overseas contracts - such as helping to design venues in other host-nations

**London 2012 Olympics 'have boosted UK economy by £9.9bn'**

**<http://www.bbc.com/news/uk-23370270>**

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### **READ THESE INSTRUCTIONS FIRST**

This insert contains the Photograph referred to in the question.

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2

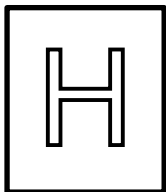
Photograph A for Question 1

Limestone cave in New Zealand



Attach Insert 2 with your answers to Question 1





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This insert contains the Figure referred to in the question.

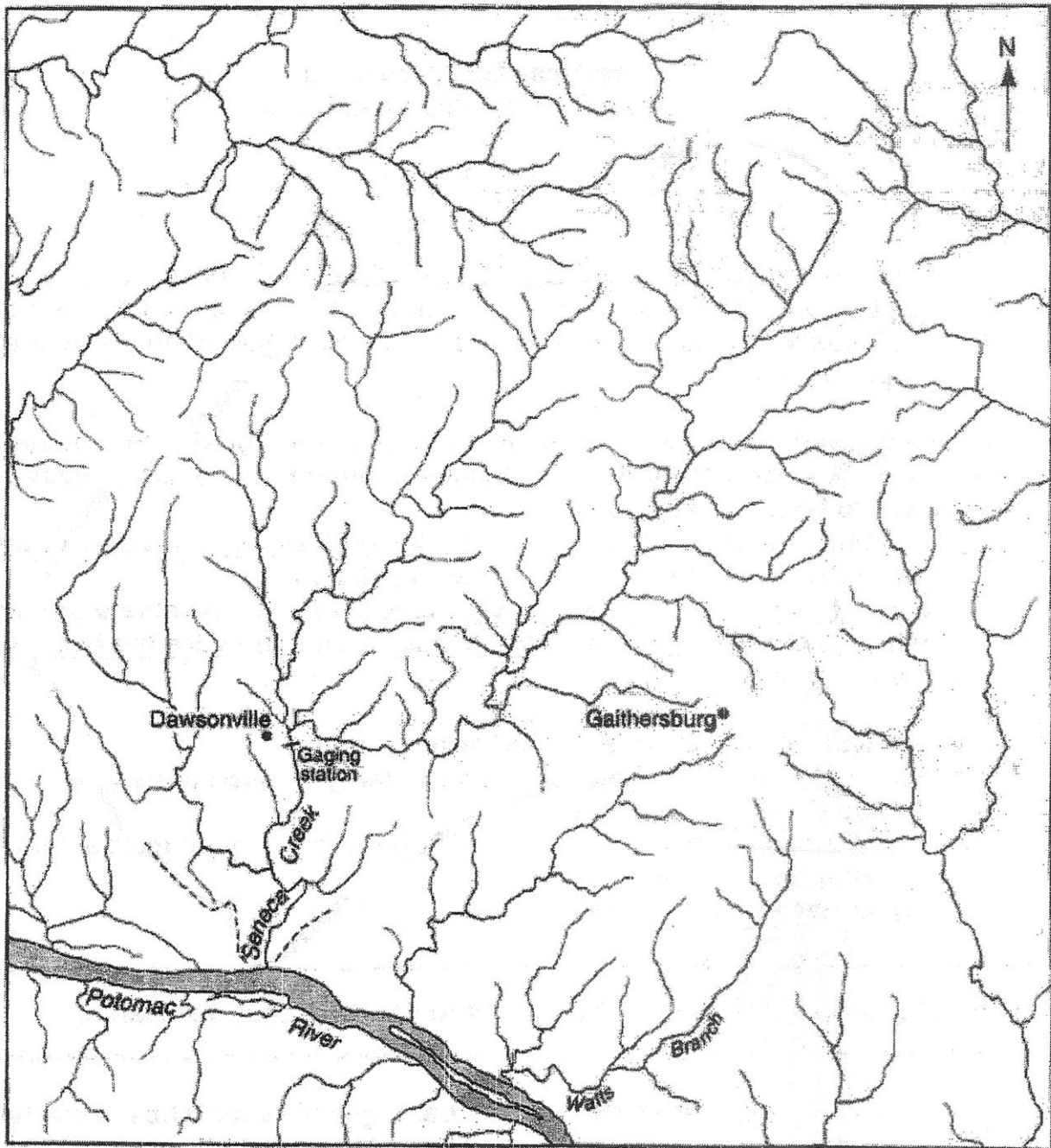
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**[Turn over**

Fig. 2 for Question 3



Drainage network for the Gaithersburg, Maryland, area, northwest of Washington, DC.

Attach Insert 3 with your answers to Question 3