

Answer **only two** questions from Sections A, B and C.
Answer **only one** question from Section D.

SECTION A

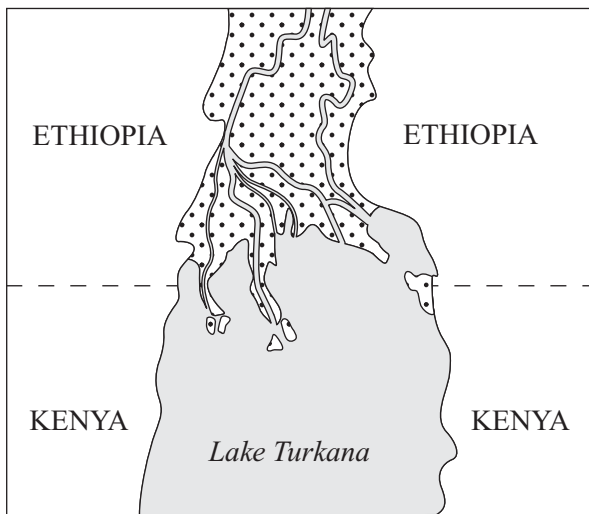
If you choose this section, answer **either** Question 1 **or** Question 2.
If you answer a question from this section, you must **not** answer Question 7 in Section D.
Each question carries 15 marks.

WATER ON THE LAND

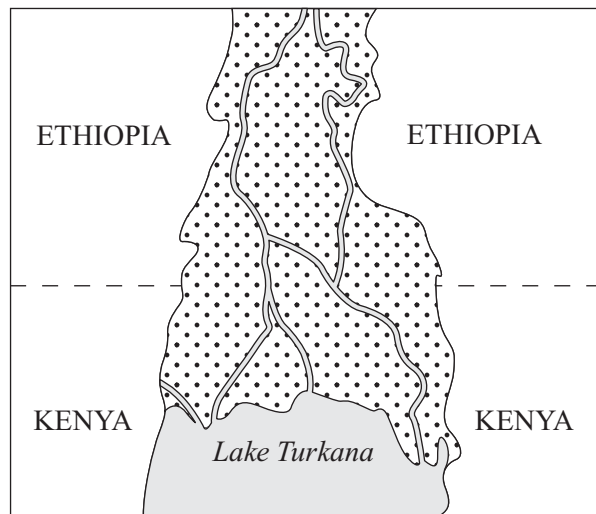
1

Total for this question: 15 marks

(a) **Figures 1a** and **1b** show changes to the River Omo Delta, on the northern shore of Lake Turkana, that took place between 1975 and 1995.



1975
Figure 1a



1995
Figure 1b

Key

0 10 20 km 	River channel	Alluvial deposits	Lake	International border
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(i) Identify **three** changes to the delta that took place between 1975 and 1995.

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- 2
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- 3
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(3 marks)

(ii) Suggest reasons for the changes identified in (a) (i).

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(5 marks)

(b) Why do features of deposition exist throughout the long profile of most rivers?

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(7 marks)

Turn over ►

2

Total for this question: 15 marks

(a) **Figure 2** shows the variations in discharge over one year measured at gauging stations on two South American rivers. A climate graph for each river basin is also given.

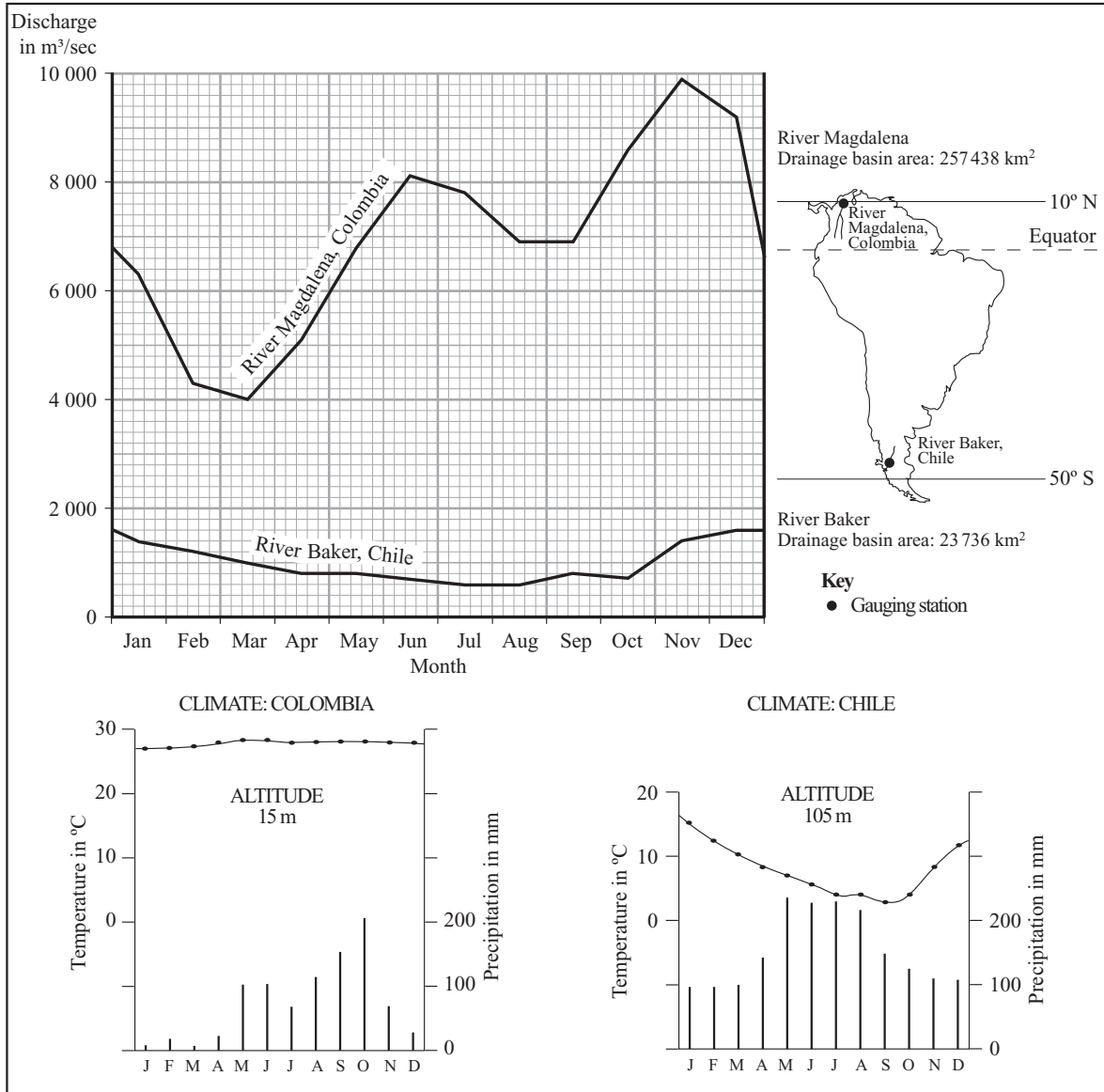


Figure 2

(i) Identify **three** differences in the pattern of discharge between the two rivers.

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- 2
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- 3
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(3 marks)

(ii) Suggest reasons for the differences identified in (a) (i).

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(5 marks)

(b) How might human activity modify the drainage basin hydrological cycle?

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(7 marks)

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SECTION B

If you choose this section, answer **either** Question 3 **or** Question 4.
If you answer a question from this section, you must **not** answer Question 8 in Section D.
Each question carries 15 marks.

CLIMATIC HAZARDS AND CHANGE

3

Total for this question: 15 marks

Figure 3 shows the locations of reported sightings of tornadoes experienced in the USA on 4 May 2003.

Map showing the locations of reported sightings of tornadoes experienced in the USA on 4 May 2003 - not reproduced here, due to third-party copyright constraints.

(a) Describe the pattern shown in **Figure 3**.

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(3 marks)

(b) Outline the meteorological causes of tornadoes.

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(5 marks)

(c) Using examples, contrast the impact of tornadoes with that of tropical revolving storms.

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(7 marks)

Turn over ►

4

Total for this question: 15 marks

Figure 4 is a collection of extracts, adapted from news bulletins, relating to the dry weather conditions in Western Europe during the summer of 2003.

Extracts adapted from news bulletins, relating to the dry weather conditions in Western Europe during the summer of 2003 - not reproduced here, due to third-party copyright constraints.

(a) Classify the different types of impact shown in **Figure 4**.

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(3 marks)

(b) Outline the atmospheric processes responsible for drought conditions.

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SECTION C

If you choose this section, answer **either** Question 5 **or** Question 6.
If you answer a question from this section, you must **not** answer Question 9 in Section D.
Each question carries 15 marks.

ENERGY AND LIFE

5

Total for this question: 15 marks

- (a) **Figure 5** is a kite diagram, showing the results of vegetation quadrat sampling along a sand dune system in south Devon.

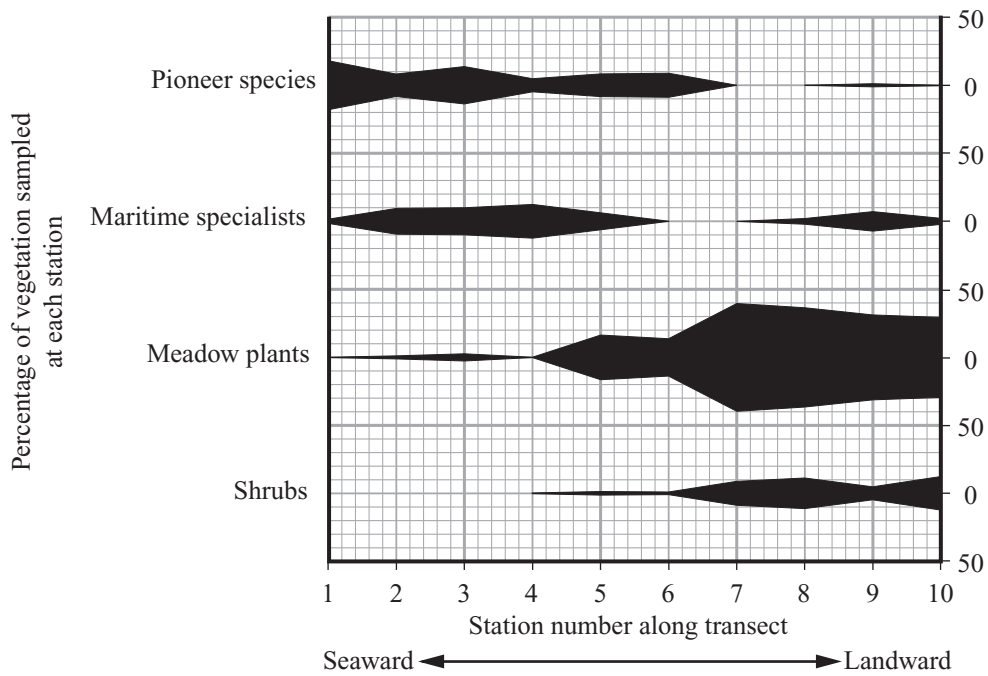


Figure 5

- (i) Describe the changes in the vegetation shown in **Figure 5**.

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(3 marks)

(ii) Suggest the reasons for the changes identified in (a) (i).

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(5 marks)

(b) Examine the circumstances that lead to the development of a plagioclimax.

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(7 marks)

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6

Total for this question: 15 marks

(a) **Figures 6a** and **6b** (*insert*) show two soil types.

(i) State the differences between the appearance of the soils in **Figures 6a** and **6b**.

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(3 marks)

(ii) Suggest reasons for the differences between the soils.

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(5 marks)

SECTION D

Answer **one** question from this section; **either** Question 7 **or** Question 8 **or** Question 9, on the lined pages that follow.

7 WATER ON THE LAND

You must **not** answer Question 7 if you have answered a question from Section A.

Examine the physical factors responsible for flooding. *(20 marks)*

8 CLIMATIC HAZARDS AND CHANGE

You must **not** answer Question 8 if you have answered a question from Section B.

Why are we encouraged to ‘think globally, act locally’ in relation to global warming?
(20 marks)

9 ENERGY AND LIFE

You must **not** answer Question 9 if you have answered a question from Section C.

Identify and explain the unique characteristics of **one** global biome that you have studied.
(20 marks)

END OF QUESTIONS

QUESTION
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QUESTION
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Question 2: Figure 2: Data from RivDis1.0 Vörösmarty *et al*, 1996.

Question 3: Figure 3: Courtesy NOAA/NESDIS/NCDC US Department of Commerce.

Question 4: Figure 4: Reprinted with permission of the Associated Press.

‘Drought leaves Europe’s farmers helpless’, by Alex Kirby, BBC News, news.bbc.co.uk

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