



Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2013

Centre Number

71	
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Candidate Number

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Geography

Assessment Unit AS 1

assessing

Physical Geography

[AG111]

FRIDAY 7 JUNE, AFTERNOON



AG111

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Section A: candidates must answer this section.

Section B: answer **all three** questions in this section.

Section C: answer any **two** questions from this section.

You should write your answers in the spaces provided in this question paper.

At the end of the examination your summary of fieldwork and table of data should be attached securely to this paper using the treasury tag supplied.

INFORMATION FOR CANDIDATES

The total mark for this paper is 90.

Quality of written communication will be assessed in **all** questions.

Figures in brackets printed down the right-hand side of the pages indicate the marks awarded to each question or part question.

For Examiner's use only

Question Number	Marks
1	
2	
3	
4	
5	
6	
7	

Total Marks

--



Section A

Answer this section

Submitted summary of fieldwork and table of data

At the end of the examination these should be attached securely to this paper using the treasury tag supplied.

- 1 (a) Study **Resource 1A** below, which displays a list of tasks compiled by a geographer when planning a field study. Select **two** from the list and discuss how they were completed as part of **your** fieldwork.

Resource 1A

TASKS

- Use of GIS
- Pilot Testing
- Sampling
- Risk Assessment
- Personal Research

Source: Principal Examiner

[6]

Examiner Only	
Marks	Remark

Section A

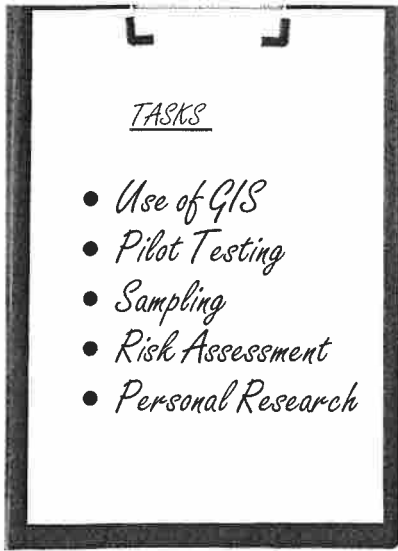
Answer this section

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Resource 1A



Source: Principal Examiner

Examiner Only	
Marks	Remark



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1	
2	
3	
4	
5	
6	
7	

Total Marks

(b) (i) Distinguish between primary and secondary sources of data.

[2]

(ii) Describe and evaluate **one** of the primary data collection methods used to produce data displayed in your submitted table.

[5]

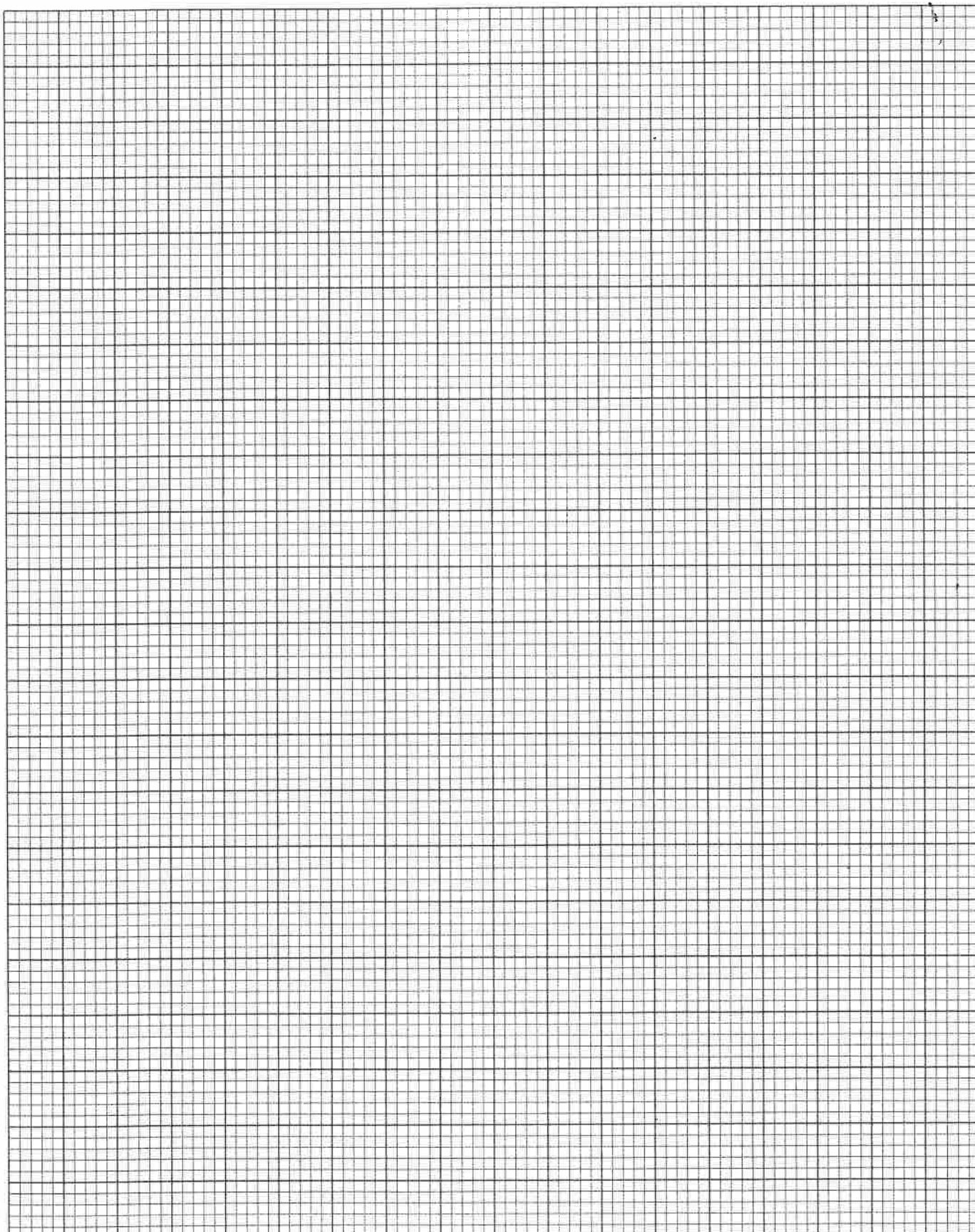
Examiner Only	
Marks	Remark

(c) (i) Using some, or all, of the data from your table, draw a graph relevant to the aim of your fieldwork. The graph should be presented with accuracy on the graph paper below.

[7]

Title of Graph _____

Examiner Only	
Marks	Remark

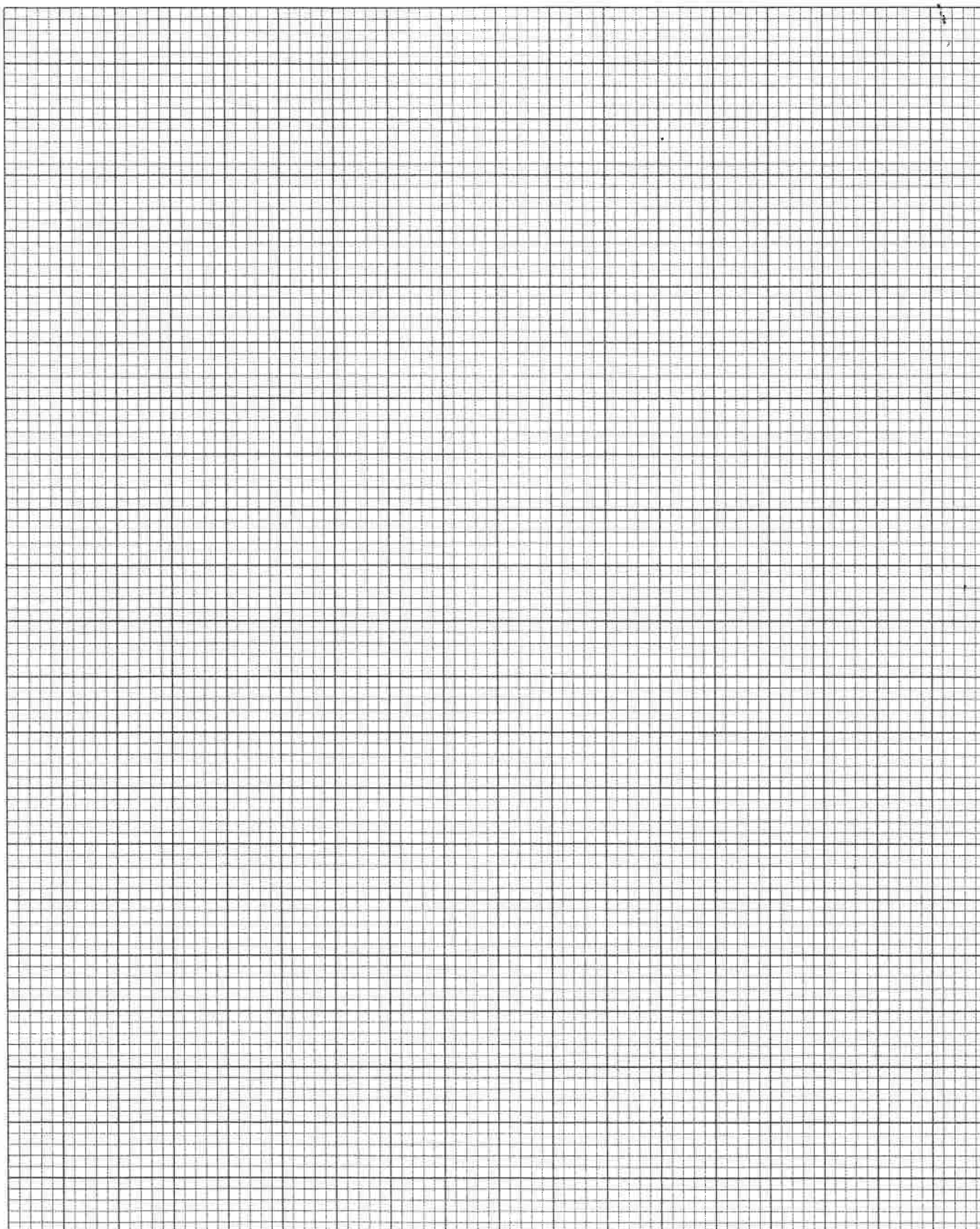


(c) (i) Using some, or all, of the data from your table, draw a graph relevant to the aim of your fieldwork. The graph should be presented with accuracy on the graph paper below.

[7]

Title of Graph _____

Examiner Only	
Marks	Remark



(b) (i) Distinguish between primary and secondary sources of data.

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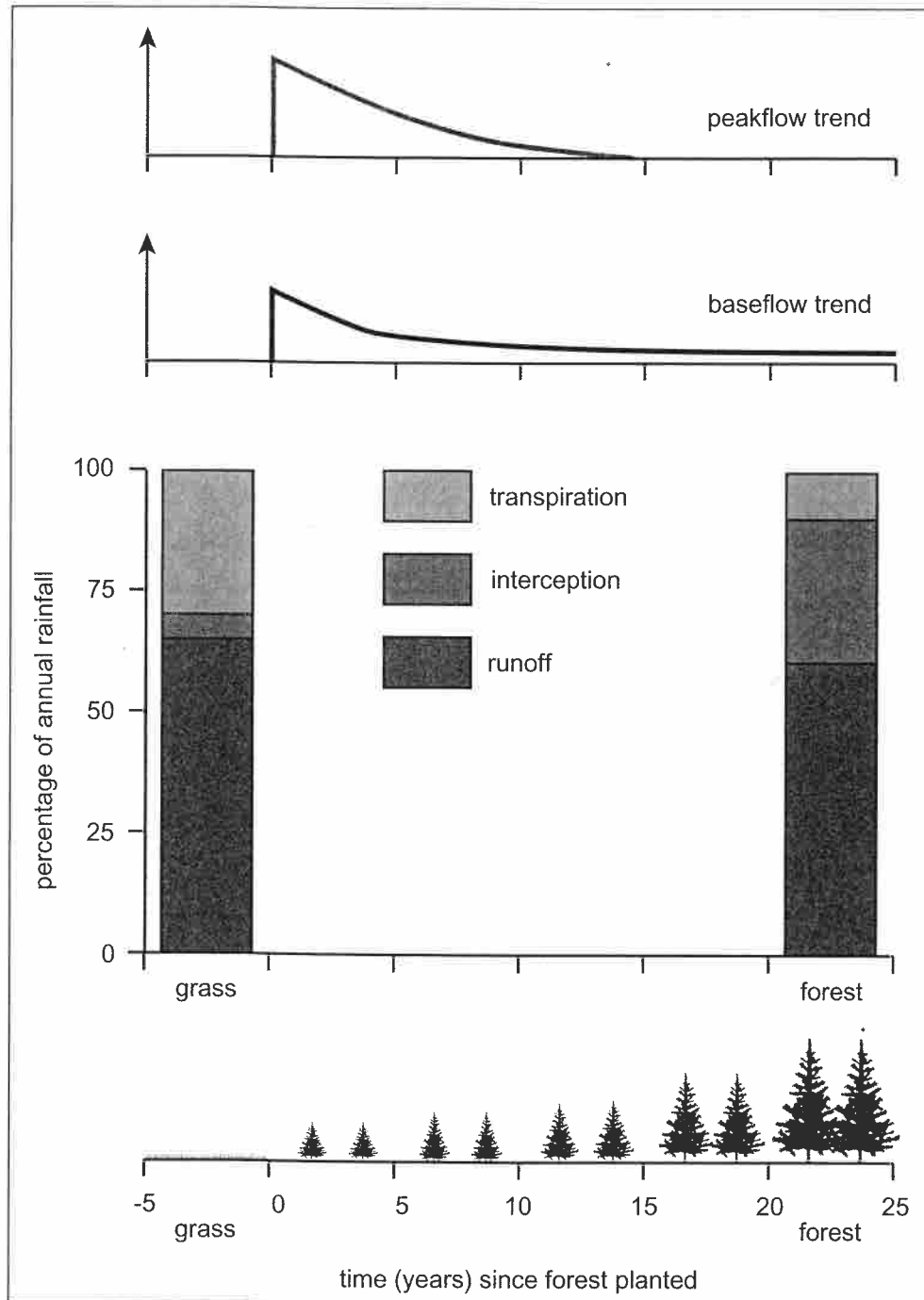
Examiner Only	
Marks	Remark

Section B

Answer **all three** questions in this section.

- 2 (a) Study **Resource 2A**, which shows the impact of land-use change in the River Coalburn drainage basin, north east of Carlisle in northern England. In this upland area, rough grassland was replaced with plantation forestry.

Resource 2A



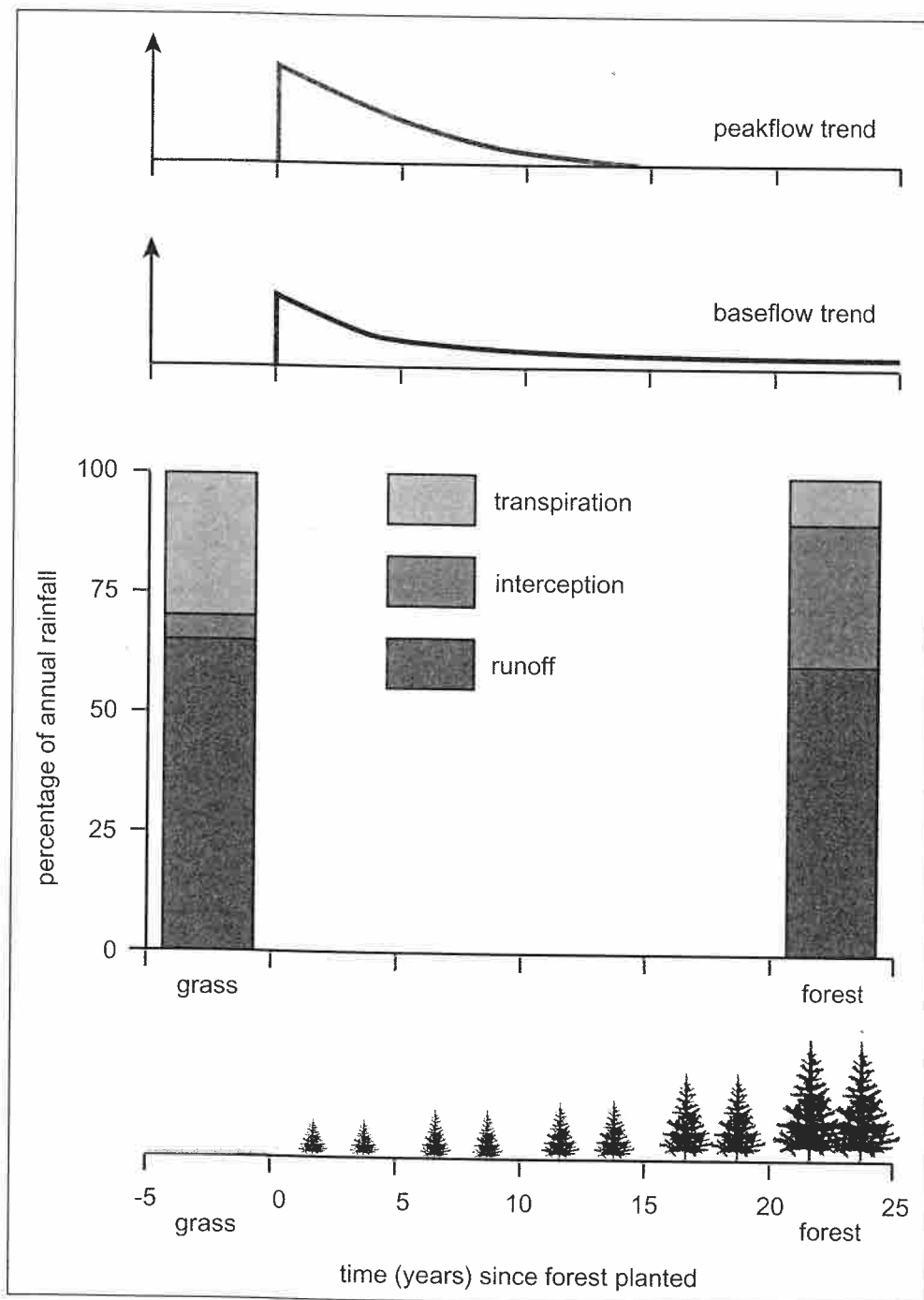
Source: adapted from Institute of Hydrology Report Number 133

Section B

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Resource 2A



Source: adapted from Institute of Hydrology Report Number 133

(ii) Outline and explain **one** geographical factor which may have influenced the results displayed on your graph.

[4]

(d) Explain the purpose of statistical analysis in a fieldwork investigation and discuss why your chosen statistical method was selected as suitable for your fieldwork.

[6]

Examiner Only	
Marks	Remark

Using information from **Resource 2A**, describe and explain the changes in the **stores** and **transfers** within this drainage basin over time.

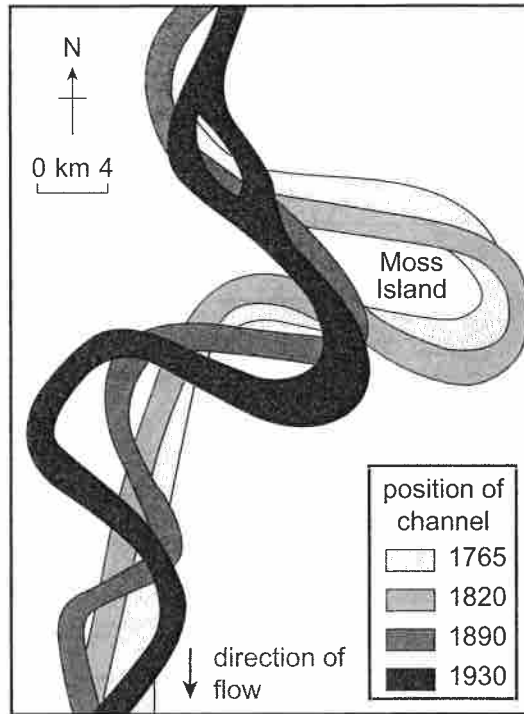
[6]

Examiner Only	
Marks	Remark

[Turn over

(b) Study **Resource 2B** which shows the changing meander patterns over time on part of the Mississippi River in the USA.

Resource 2B



Source: adapted from projects.cie.org.uk/physical/drainage

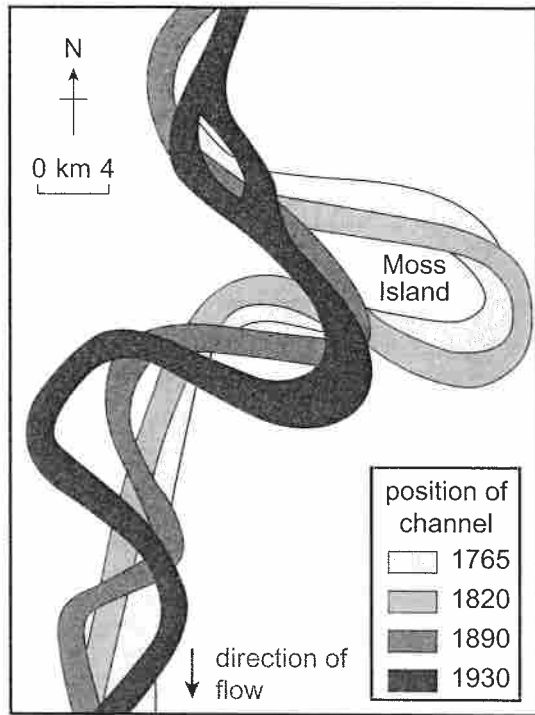
Describe the changing pattern and explain the river processes which form these meanders.

_____ [6]

Examiner Only	
Marks	Remark

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Resource 2B



Source: adapted from projects.cie.org.uk/.../physical/drainage

Describe the changing pattern and explain the river processes which form these meanders.

[6]

Examiner Only	
Marks	Remark

Using information from **Resource 2A**, describe and explain the changes in the **stores** and **transfers** within this drainage basin over time.

[6]

Examiner Only	
Marks	Remark

3 (a) Study **Resource 3A**, on page 11, which shows growing season precipitation and some of the soil conservation methods used in three provinces of the Canadian Prairies, a mid-latitude grassland ecosystem.

(i) Which province receives the highest amount of growing season precipitation?

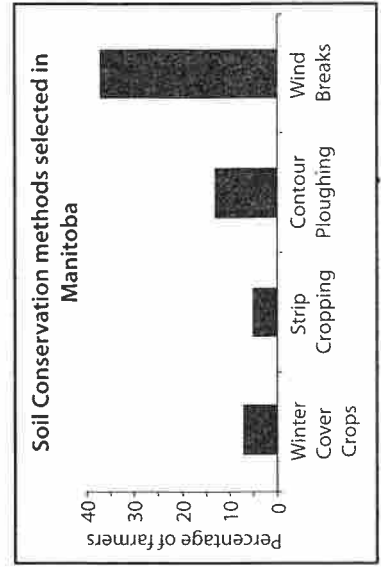
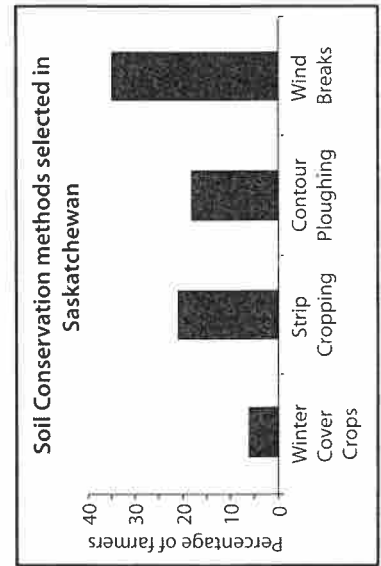
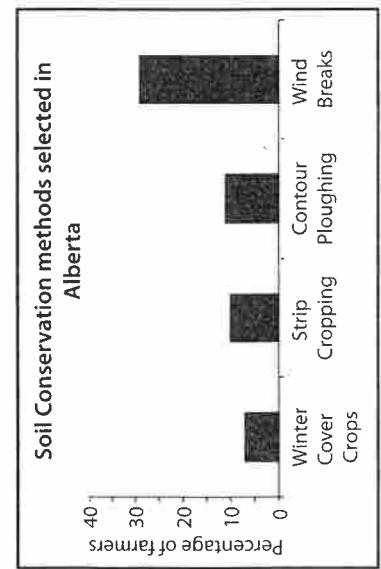
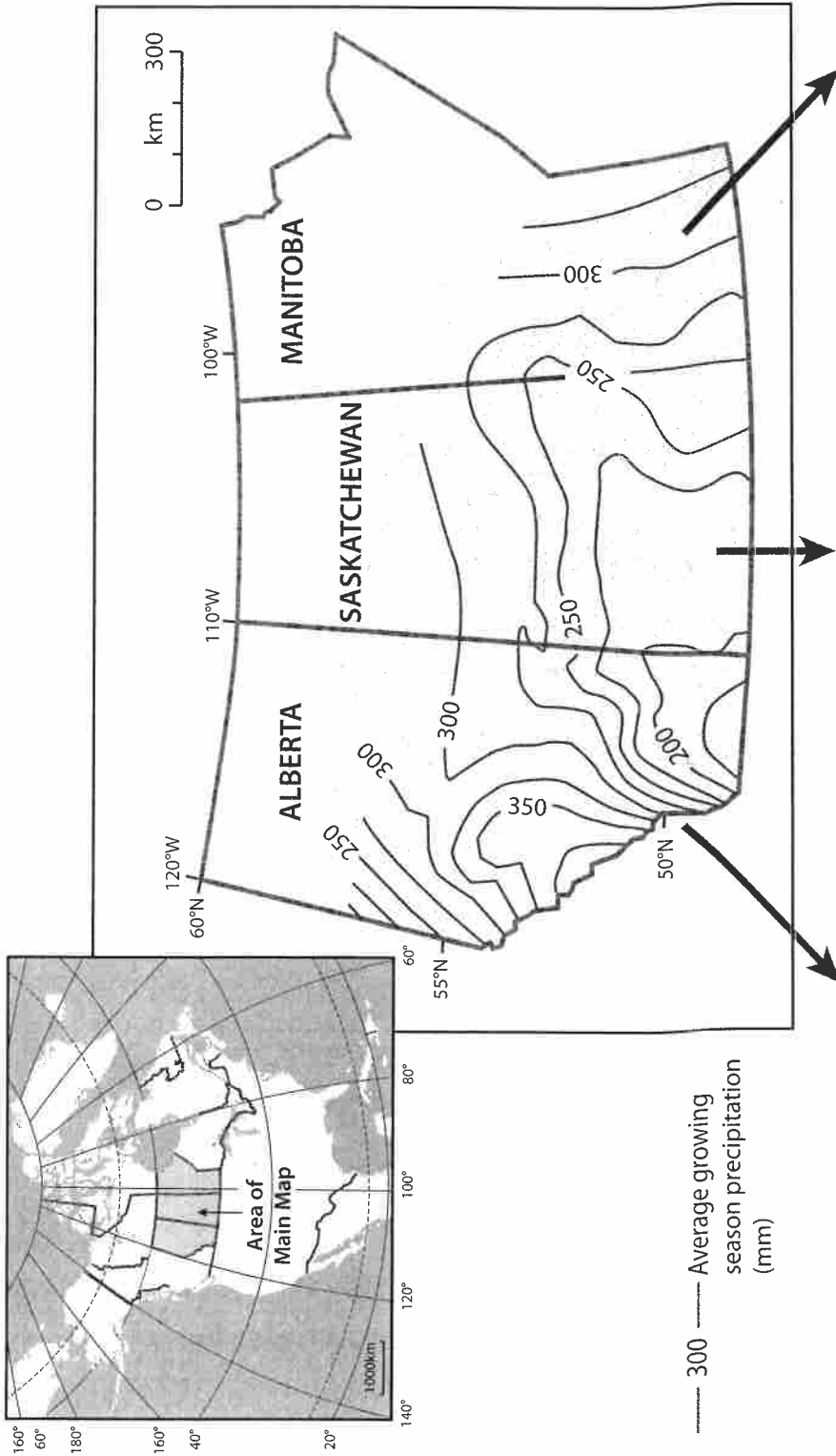
_____ [1]

(ii) Compare the popularity of the soil conservation methods selected by farmers in any **one** province and explain why management of this ecosystem is necessary.

_____ [6]

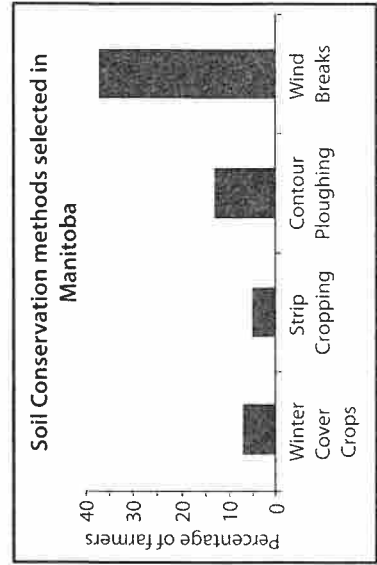
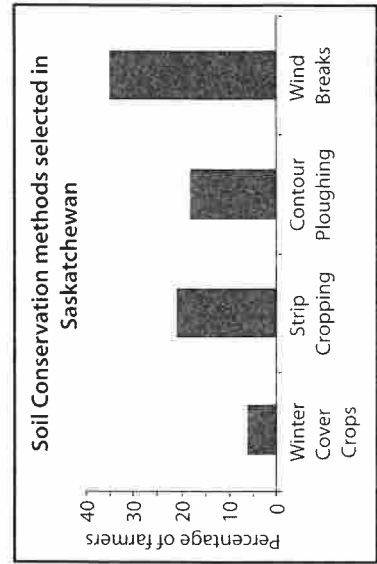
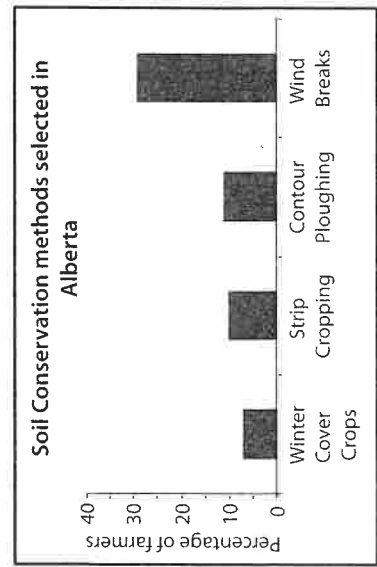
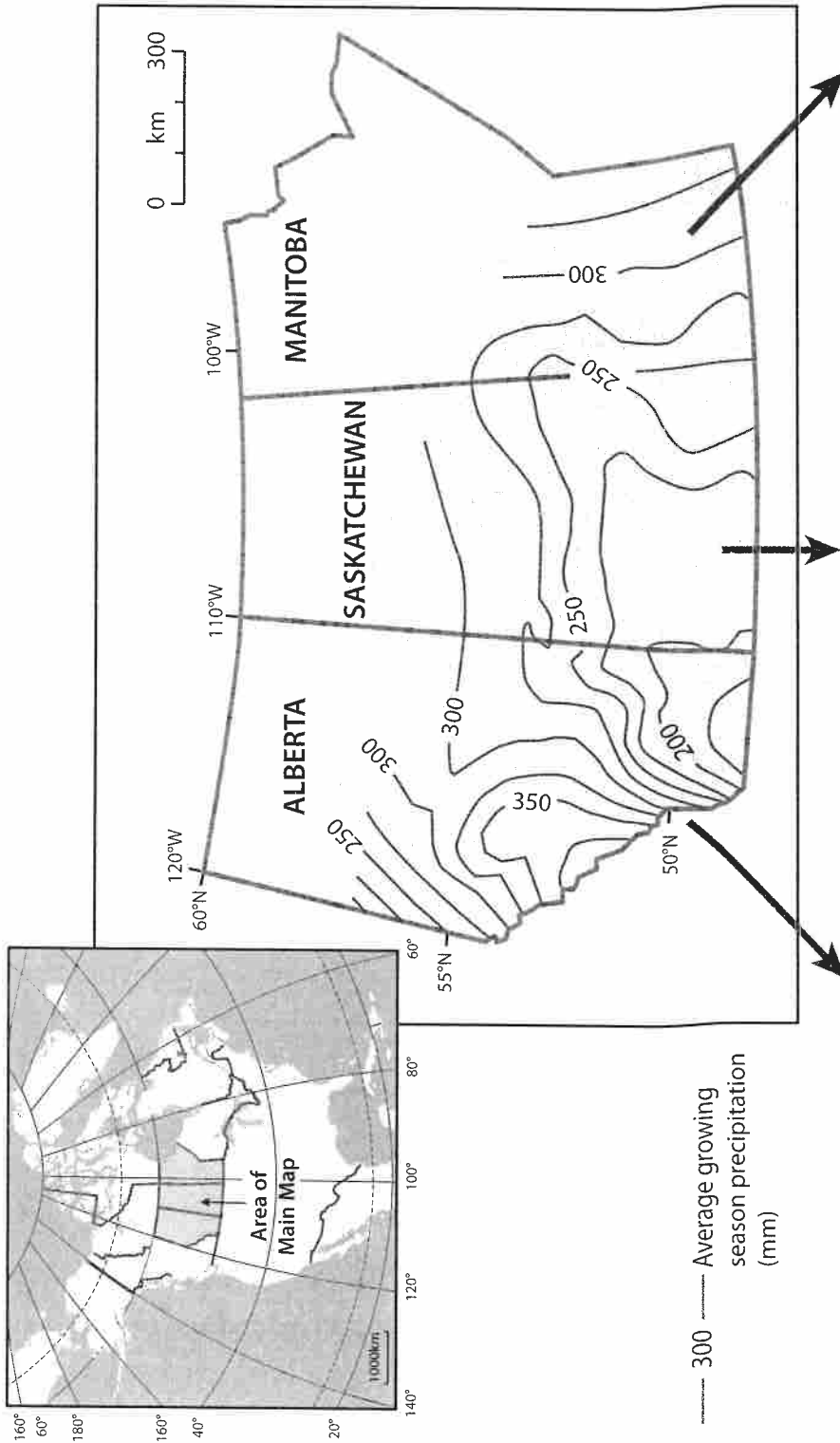
Examiner Only:	
Marks	Remark

Resource 3A



Sources: maps adapted from Climate Research Volume 11: 191–208. Graphs by Principal Examiner

Resource 3A



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(i) Which province receives the highest amount of growing season precipitation?

_____ [1]

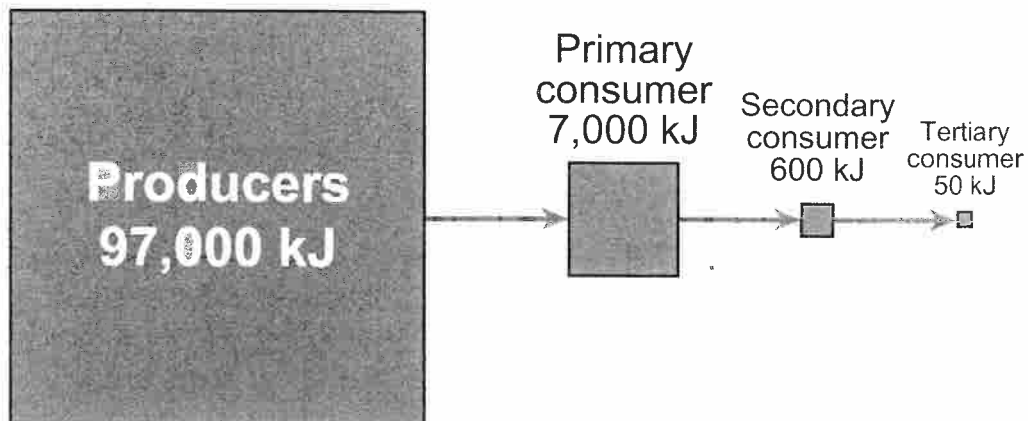
(ii) Compare the popularity of the soil conservation methods selected by farmers in any **one** province and explain why management of this ecosystem is necessary.

_____ [6]

Examiner Only	
Marks	Remark

(b) Study **Resource 3B** which shows the proportion of energy stored within the trophic levels of a food chain.

Resource 3B



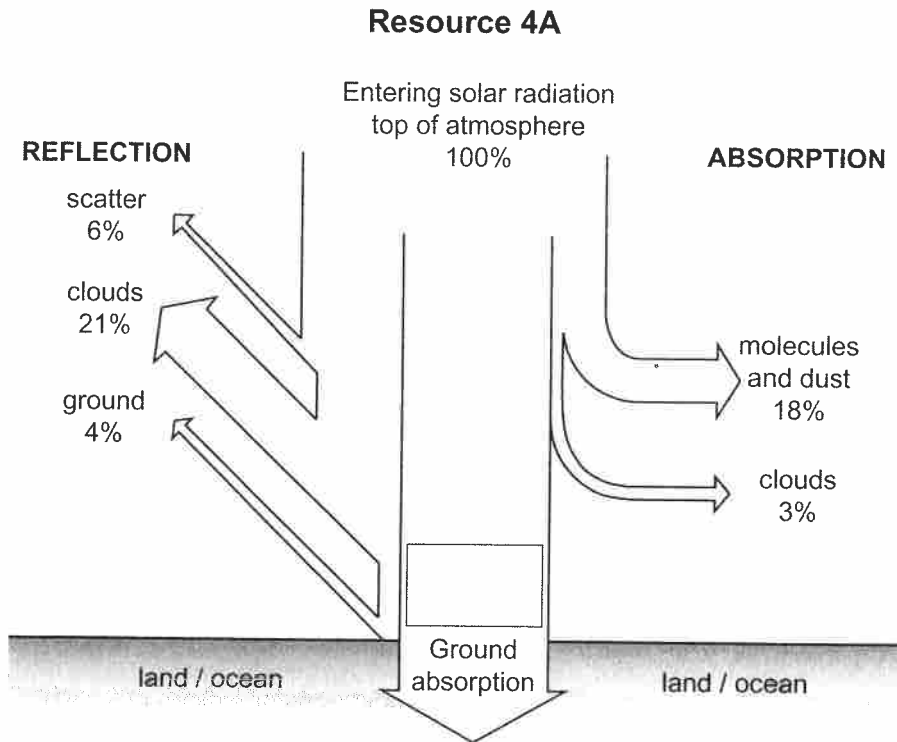
Source: scienceaid.co.uk

Describe the transfer of energy in this food chain and explain how energy is lost from the system.

[5]

Examiner Only	
Marks	Remark

- 4 (a) Study **Resource 4A** showing a **general** model for global solar energy input.



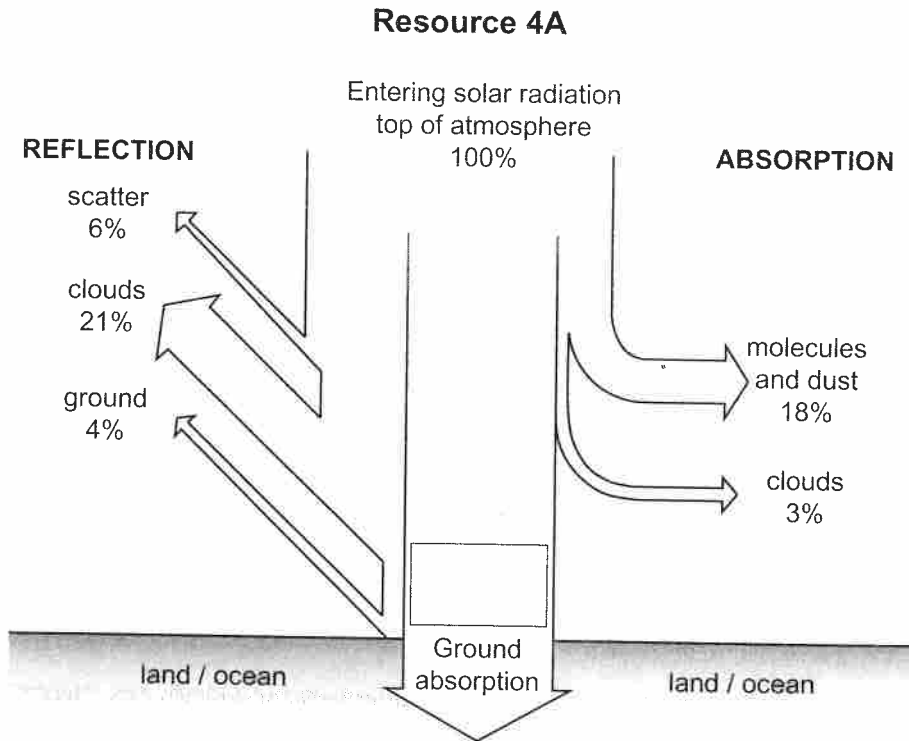
Source: Adapted from "Modern Physical Geography" Strahler & Strahler

- (i) Complete the box in **Resource 4A** to show the percentage of energy available for absorption at the ground surface. [1]
- (ii) Outline **one** reason why the percentage of energy received at the ground surface may vary from one place to another.

[2]

Examiner Only	
Marks	Remark

4 (a) Study **Resource 4A** showing a **general** model for global solar energy input.



Source: Adapted from "Modern Physical Geography" Strahler & Strahler

(i) Complete the box in **Resource 4A** to show the percentage of energy available for absorption at the ground surface. [1]

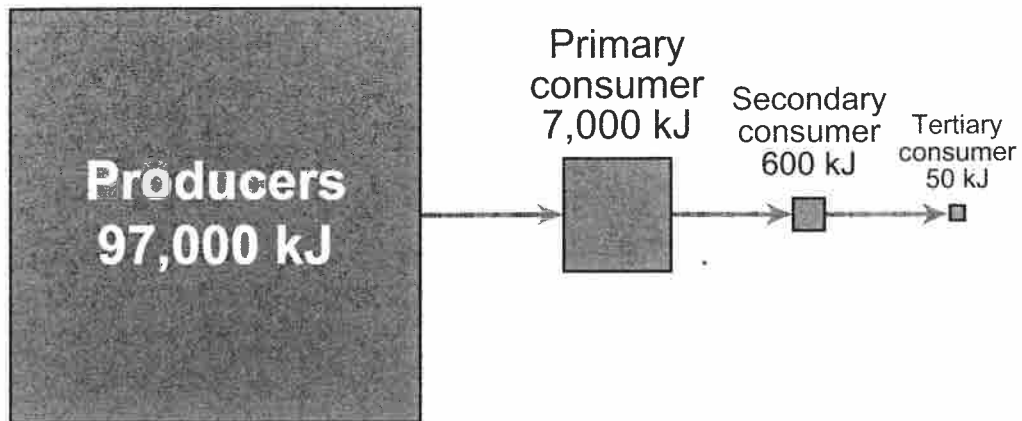
(ii) Outline **one** reason why the percentage of energy received at the ground surface may vary from one place to another.

[2]

Examiner Only	
Marks	Remark

(b) Study **Resource 3B** which shows the proportion of energy stored within the trophic levels of a food chain.

Resource 3B



Source: scienceaid.co.uk

Describe the transfer of energy in this food chain and explain how energy is lost from the system.

[5]

Examiner Only	
Marks	Remark

(iii) Distinguish between **horizontal** and **vertical** heat transfers in relation to global energy balance.

[3]

Examiner Only	
Marks	Remark

(b) Study **Resource 4B** which shows some of the protective measures used in New York in preparation for Hurricane Irene in August 2011.

Resource 4B



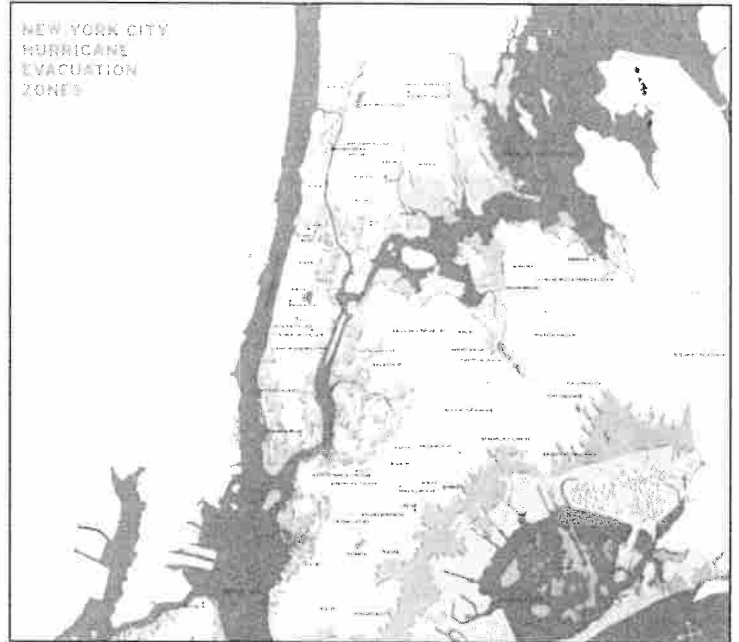
Evacuate: A map showing New York's evacuation zones in colour.



Sources: <http://pixmag.blogspot.com/2011/08/lits-here-new-york-prepares-for-lockdown.html>
http://www.telegraph.co.uk/.../IRENEGET_1982209c.jpg

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Resource 4B



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(iii) Distinguish between **horizontal** and **vertical** heat transfers in relation to global energy balance.

[3]

Examiner Only	
Marks	Remark

Section C

Answer **any two** questions in this section.

- 5 Describe and explain the physical and human causes of flooding in a large scale drainage basin or its delta. [12]
- 6 Describe and explain the biotic and abiotic changes which occur in your small or regional scale study of vegetation succession. [12]
- 7 Explain the formation of a mid-latitude frontal depression and use your case study to analyse its impact on people. [12]

Examiner Only	
Marks	Remark

Use **Resource 4B** and your own case study to discuss how hurricane protective measures can be used to reduce loss of life and damage to properties.

[6]

Examiner Only	
Marks	Remark