



Rewarding Learning

**ADVANCED SUBSIDIARY (AS)**  
**General Certificate of Education**  
**2013**

Centre Number

71

Candidate Number

## Geography

Assessment Unit AS 1  
*assessing*  
 Physical Geography  
**[AG111]**



**FRIDAY 7 JUNE, AFTERNOON**

### 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.**

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	

Total Marks

### 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.

**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**

*Source: Principal Examiner*

---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---

[6]

Examiner Only	
Marks	Remark

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

[2]

<b>Examiner Only</b>	
<b>Marks</b>	<b>Remark</b>

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

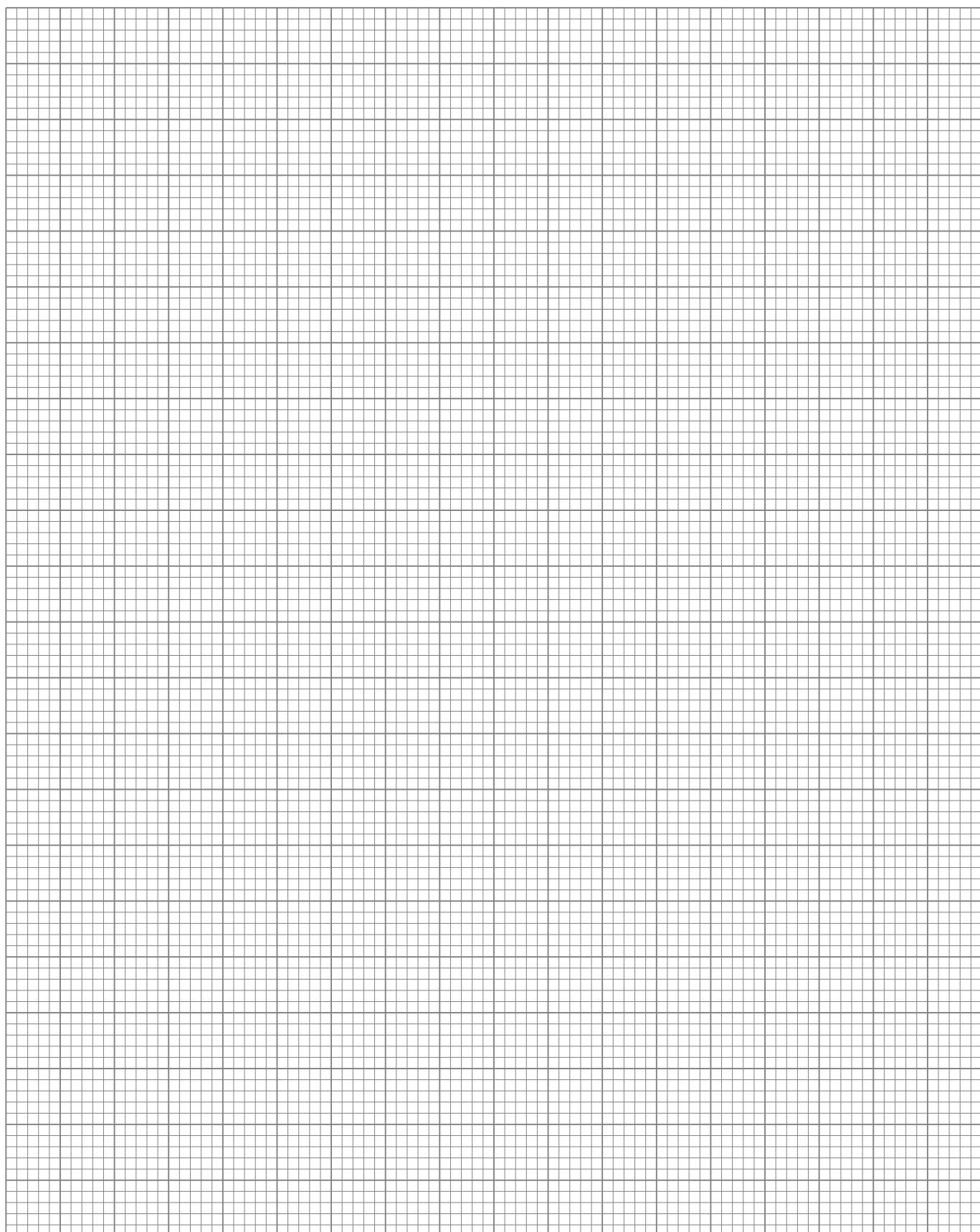
[5]

(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



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

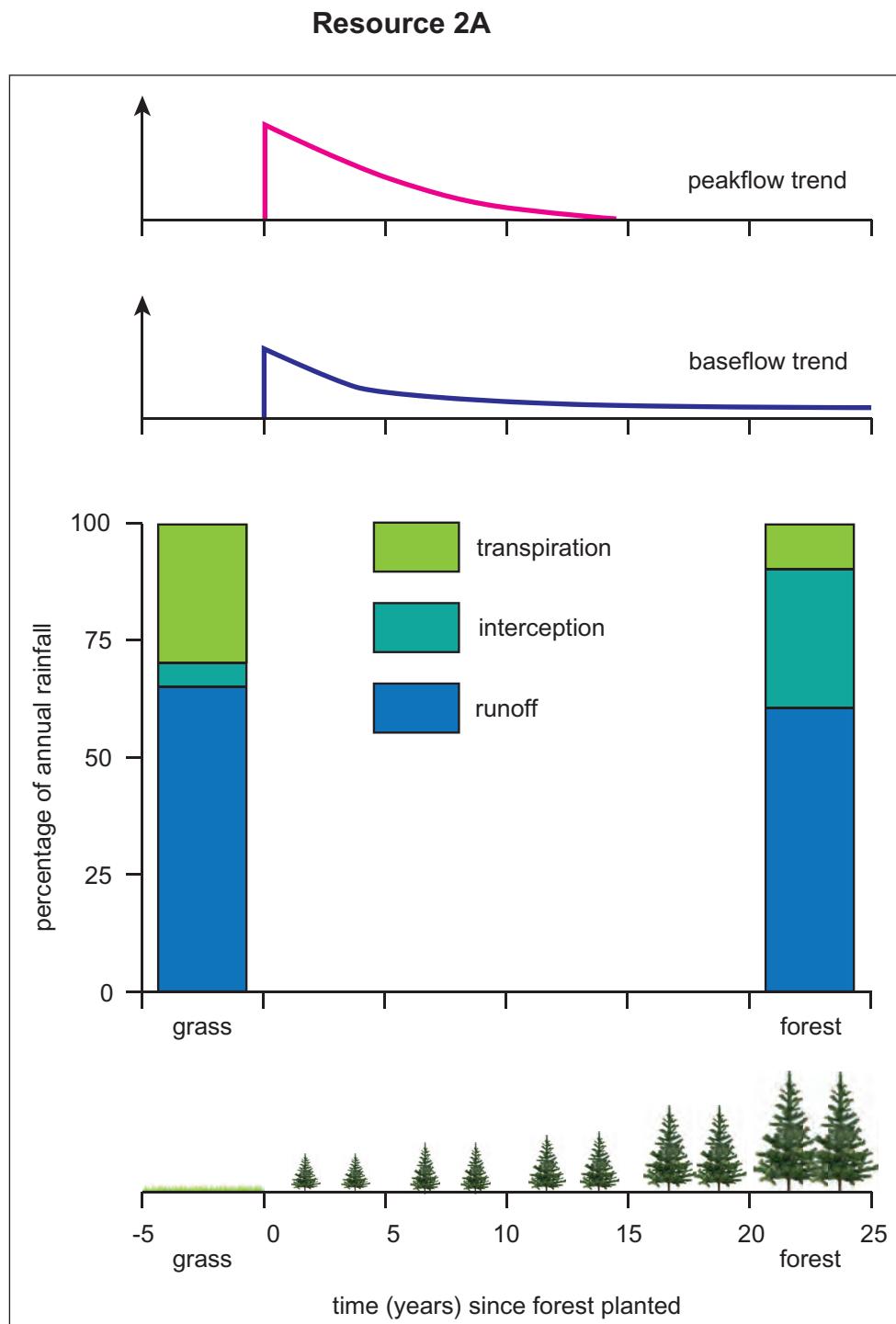
<b>Examiner Only</b>	
<b>Marks</b>	<b>Remark</b>

(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.

## 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.



© Institute of Hydrology Report Number 133 page 56 Fig. 26 by m Robinson, R E Moore, T R Nisbet & J R Blackie, 1998, published by the Centre for Ecology and Hydrology

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

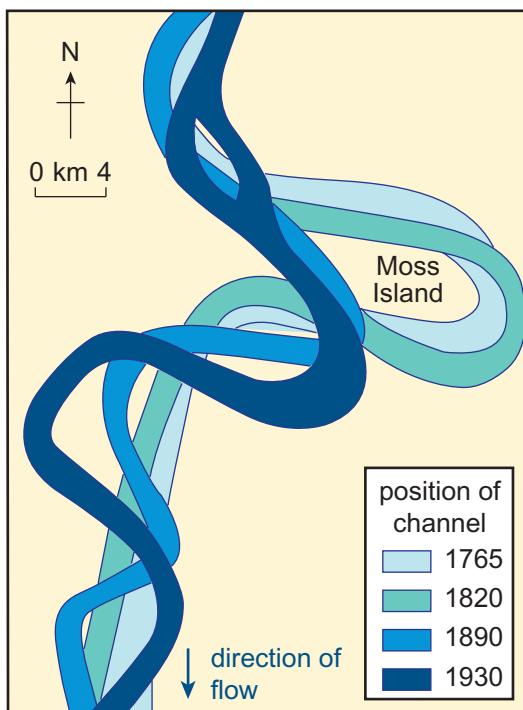
[6]

<b>Examiner Only</b>	
<b>Marks</b>	<b>Remark</b>

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

Examiner Only	
Marks	Remark

**Resource 2B**



Adapted from: © <http://projects.cie.org.uk/banglao/textbook/mississippimeanders/files/drainage.htm>  
Reproduced by permission of the Cambridge International Examinations

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

---



---



---



---



---



---



---



---



---



---



---



---



---

[6]

**BLANK PAGE**

**(Questions continue overleaf)**

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.

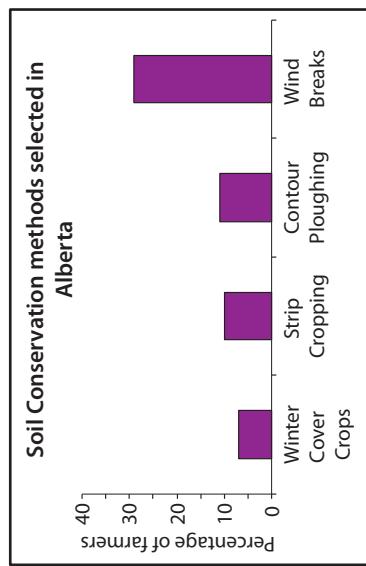
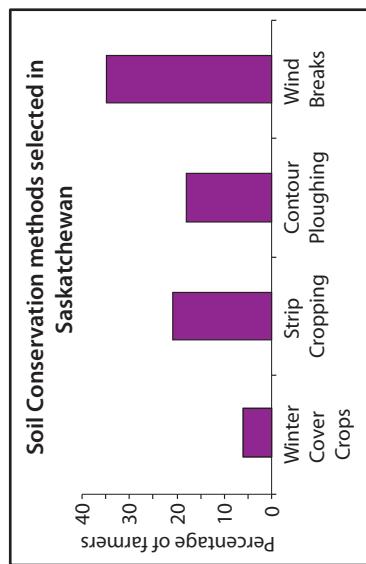
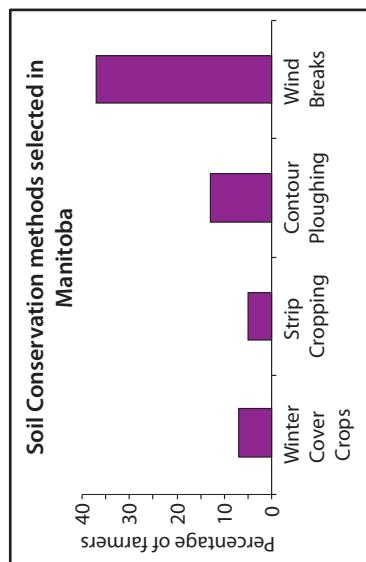
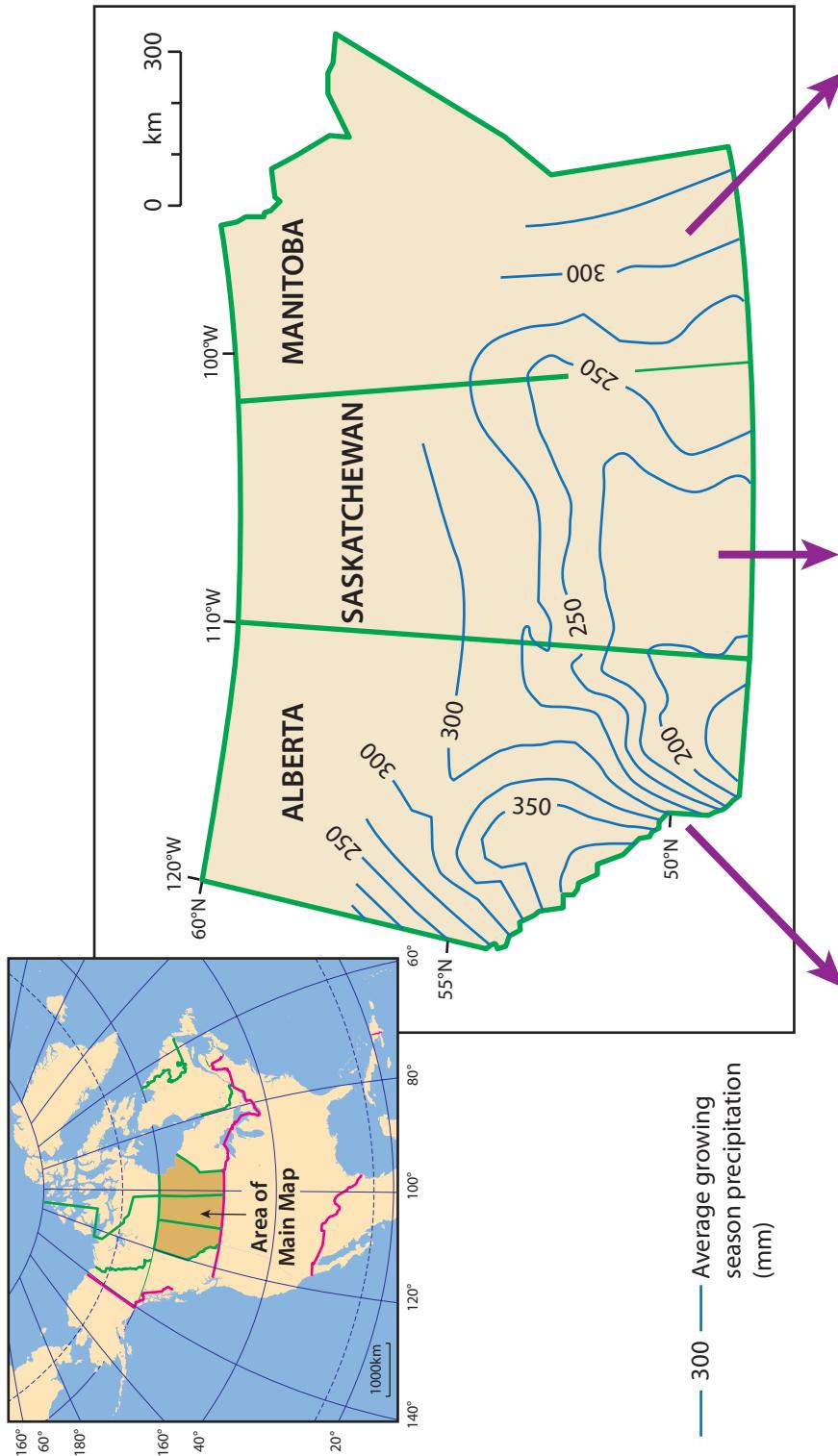
(i) Which province receives the highest amount of growing season precipitation?

---

[1]

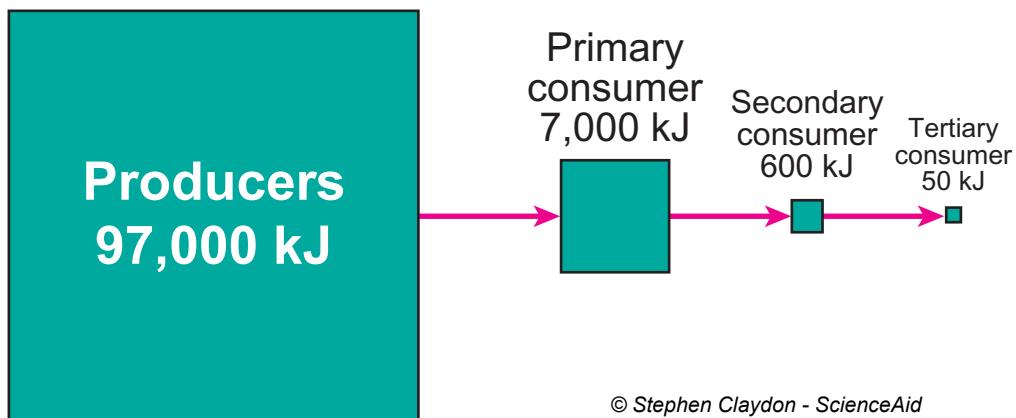
(ii) Compare the popularity of the soil conservation methods selected by farmers in any **one** province and explain why management of this ecosystem is necessary.

<b>Examiner Only</b>	
<b>Marks</b>	<b>Remark</b>

**Resource 3A**

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

**Resource 3B**



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

---



---



---



---



---



---



---



---



---



---



---



---

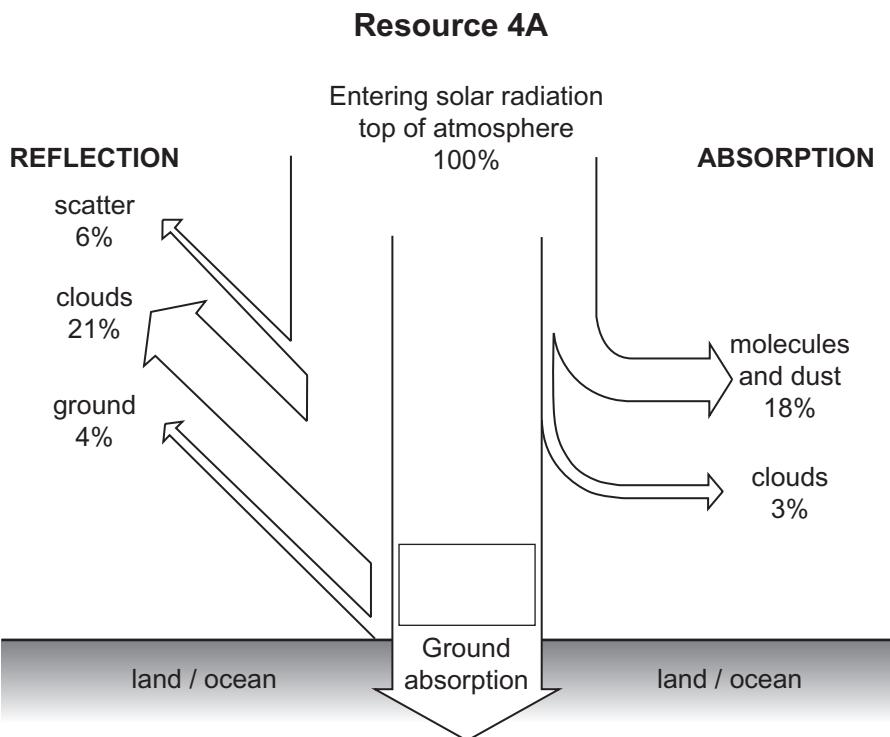
[5]

Examiner Only	
Marks	Remark

**BLANK PAGE**

**(Questions continue overleaf)**

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



© Modern Physical Geography – Fourth edition by A H Strahler and A N Strahler, published by John Wiley & Sons, 1992. ISBN 0471533920. Reproduced by permission of Mr A H 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

(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



© Mario Tama / Getty Images



"2011 New York City Evacuation Zones Map" ©2011. New York City Office of Emergency Management. All rights reserved. "2011 New York City Evacuation Zones Map" used with the permission of the City of New York



© Timothy A Clary / AFP / Getty Images



© AP/Press Association Images



© Timothy A Clary / AFP / Getty Images



© Eduardo Munoz / Reuters / RTR2QDK

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

**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

## Question Number

Number your answers clearly

Question  
Number

Number your answers clearly

Question  
Number

Number your answers clearly

Question  
Number

Number your answers clearly

## Question Number

Number your answers clearly

## Question Number

Number your answers clearly

## Question Number

Number your answers clearly

## Question Number

Number your answers clearly

## Question Number

Number your answers clearly

## Question Number

Number your answers clearly

---

**THIS IS THE END OF THE QUESTION PAPER**

---





Permission to reproduce all copyright material has been applied for.  
In some cases, efforts to contact copyright holders may have been unsuccessful and CCEA  
will be happy to rectify any omissions of acknowledgement in future if notified.