Rewarding Learning

Centre Number

71

Candidate Number

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
January 2009

Geography

Assessment Unit AS 1

assessing

Physical Geography

[AG111]

MONDAY 26 JANUARY, 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.
You should write your answers for Section A and Section B in the spaces provided in this question paper.
Section C: answer any **two** questions from this section. Write your answers to Section C on the lined paper at the end of this booklet.
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	

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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) "Representative data collection generally requires a consideration of **both** sampling method and sample size."
Discuss this statement with reference to **your** fieldwork.

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_____ [6]

(b) Describe **one** primary data collection method used in your fieldwork and comment on its usefulness in providing reliable data.

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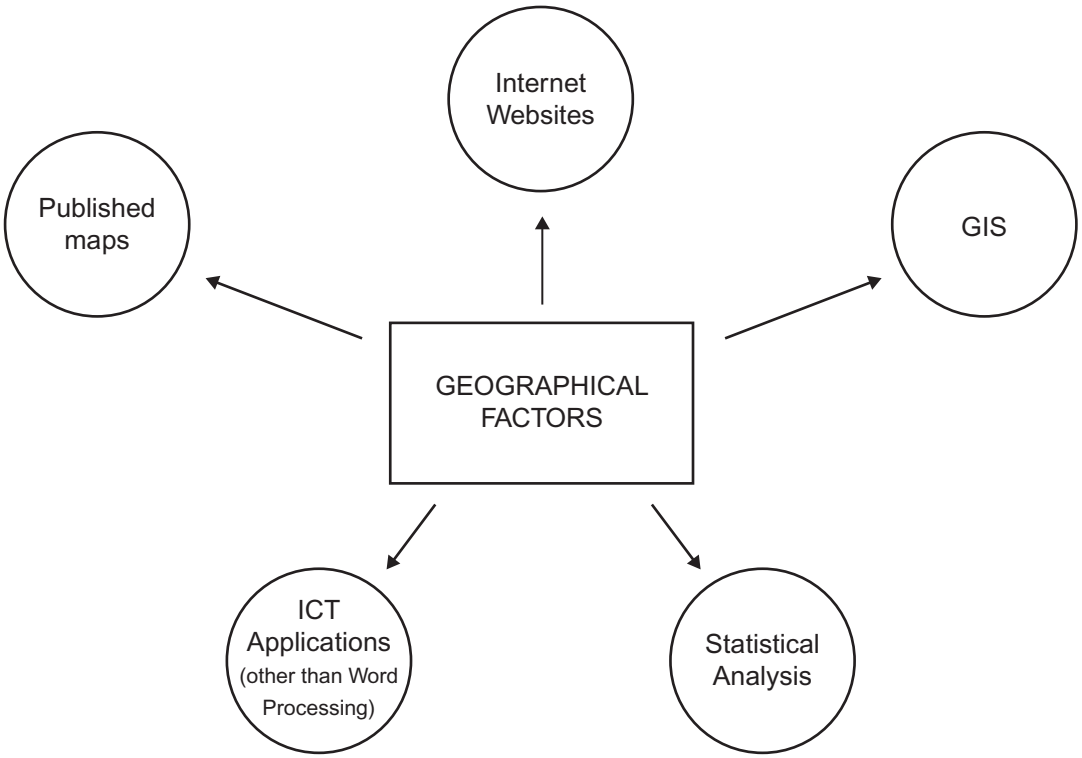
_____ [4]

(c) Select **one** of the factors shown in **Resource 1** and outline its precise purpose, and usefulness, within your fieldwork investigation.

Resource 1



Source: Principal Examiner

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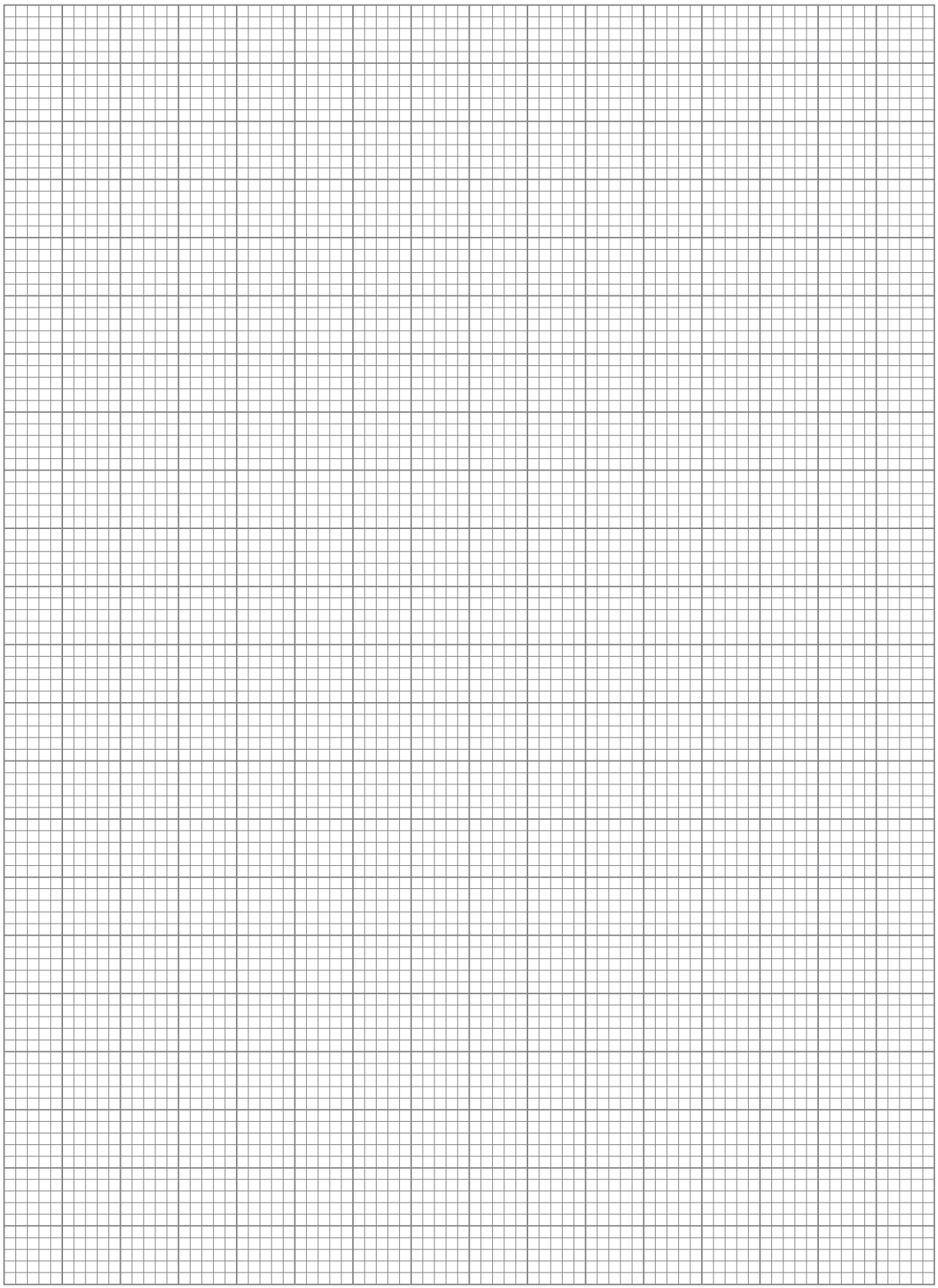
_____ [4]

(d) (i) Select an appropriate graphical technique and present some, or all, of the data from your table. Your graph must be relevant to the aim of your fieldwork. [7]

Title of Graph: _____



(ii) Describe your graph in relation to the **aim** of your fieldwork.

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(iii) Explain what your graph shows with reference to relevant geographical theory.

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Section B

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

2 (a) (i) In the box below, draw and annotate a diagram to show the formation of a waterfall.

[4]

(ii) Explain what happens to the position of this feature over time.

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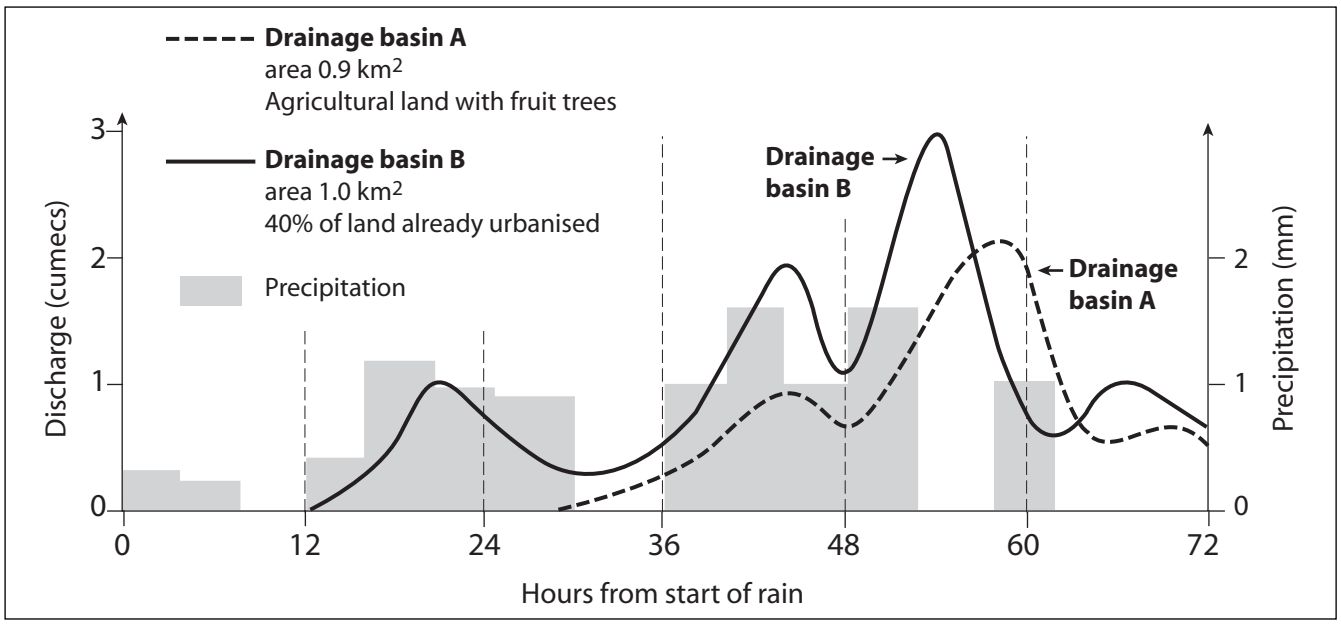
_____ [2]

(b) Study **Resource 2** which shows storm hydrographs for two neighbouring streams over a 3 day period. Drainage basin A has agricultural land with fruit trees and drainage basin B is 40% urbanised.

Resource 2



Using information from **Resource 2**, describe and explain the effects of the storm event on both streams.

Examiner Only	
Marks	Remark

[6]

3 **(a)** In an ecosystem, describe how nutrients are cycled between soil, litter and biomass.

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(b) Describe the effects of **leaching** and **capillary action** on the soil profile of mollisols/chernozems in mid-latitude grasslands.

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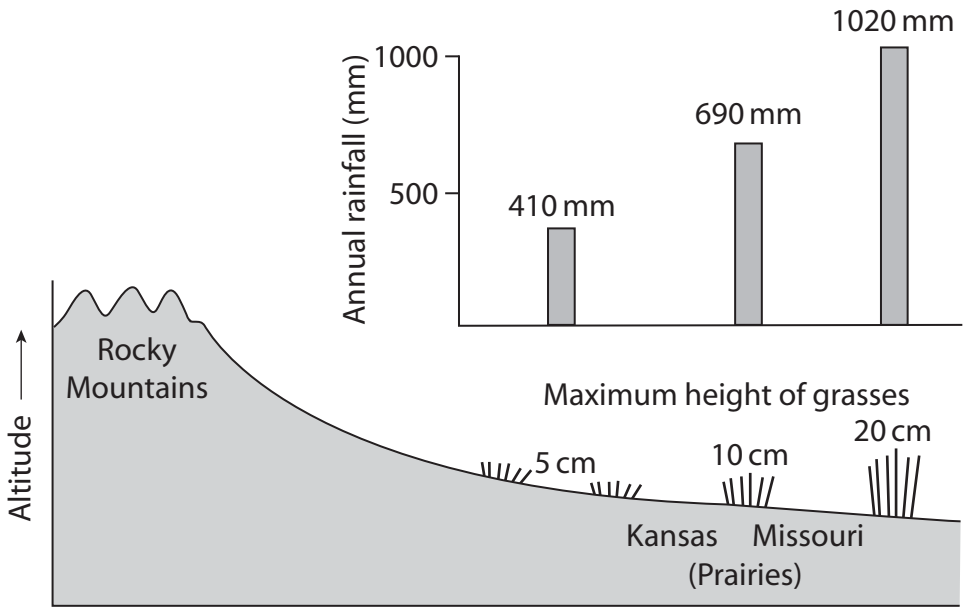
(c) Study **Resource 3** which shows grass height and annual rainfall in an area of mid-latitude grasslands.

Resource 3



Using **Resource 3**, describe the relationship between grass height and annual rainfall.

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_____ [1]

(d) Explain why grasses are the dominant plant species (climatic climax vegetation) in areas of mid-latitude grasslands.

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4 **(a)** Explain **one** of the various causes of precipitation.

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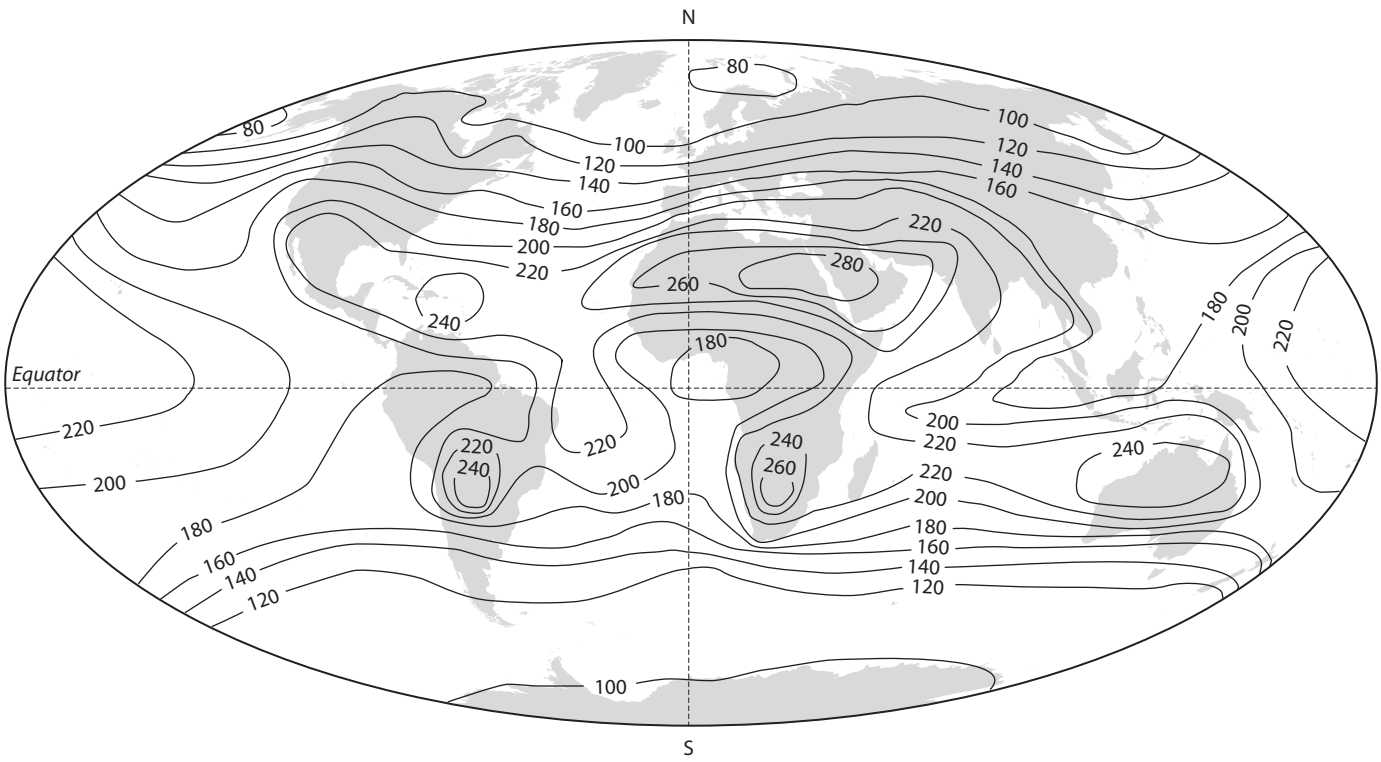
(b) Study **Resource 4** which shows the average annual amount of incoming solar radiation received at the earth's surface.

Resource 4



Describe the pattern shown on **Resource 4** and explain **one** method of heat transfer which operates to maintain the global energy balance.

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(c) Evaluate the effectiveness of **one** protective measure used to reduce loss of life or damage to property in areas which experience tropical storms (hurricanes).

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Section C

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

5 "The beneficial effects of flooding usually outweigh the detrimental effects." Discuss this statement with reference to the large scale drainage basin or delta you have studied. [12]

6 Describe the physical characteristics of a small scale ecosystem you have studied and discuss how energy moves through the ecosystem. [12]

7 With the aid of a diagram, describe the structure of a mid-latitude frontal depression. Explain the weather it produces and discuss its impact on people. [12]

Question Number

Number your answers clearly

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