Rewarding Learning

Centre Number
71

Candidate Number

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2010

Geography

Assessment Unit AS 1

assessing

Physical Geography

[AG111]

AG111

TUESDAY 1 JUNE, MORNING

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	

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) (i) Study **Resource 1** on page 3 which illustrates a partially completed diagram showing the "steps" involved in the investigation process.
Complete steps 4–6 to illustrate the role of three additional "steps" which are necessary in your fieldwork to produce a geographical conclusion. [6]

(ii) Step 2 involves several essential processes of fieldwork planning. This may include a consideration of:

- **Sampling size**
- **Sampling method**
- **Pilot testing**
- **Risk assessment**
- **Site selection**

Select **two** of these processes and describe how and why they were conducted as part of your fieldwork planning.

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_____ [6]

Resource 1

(b) Explain what is meant by secondary data and outline how **one specific** source was (or could be) used in your fieldwork.

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_____ [4]

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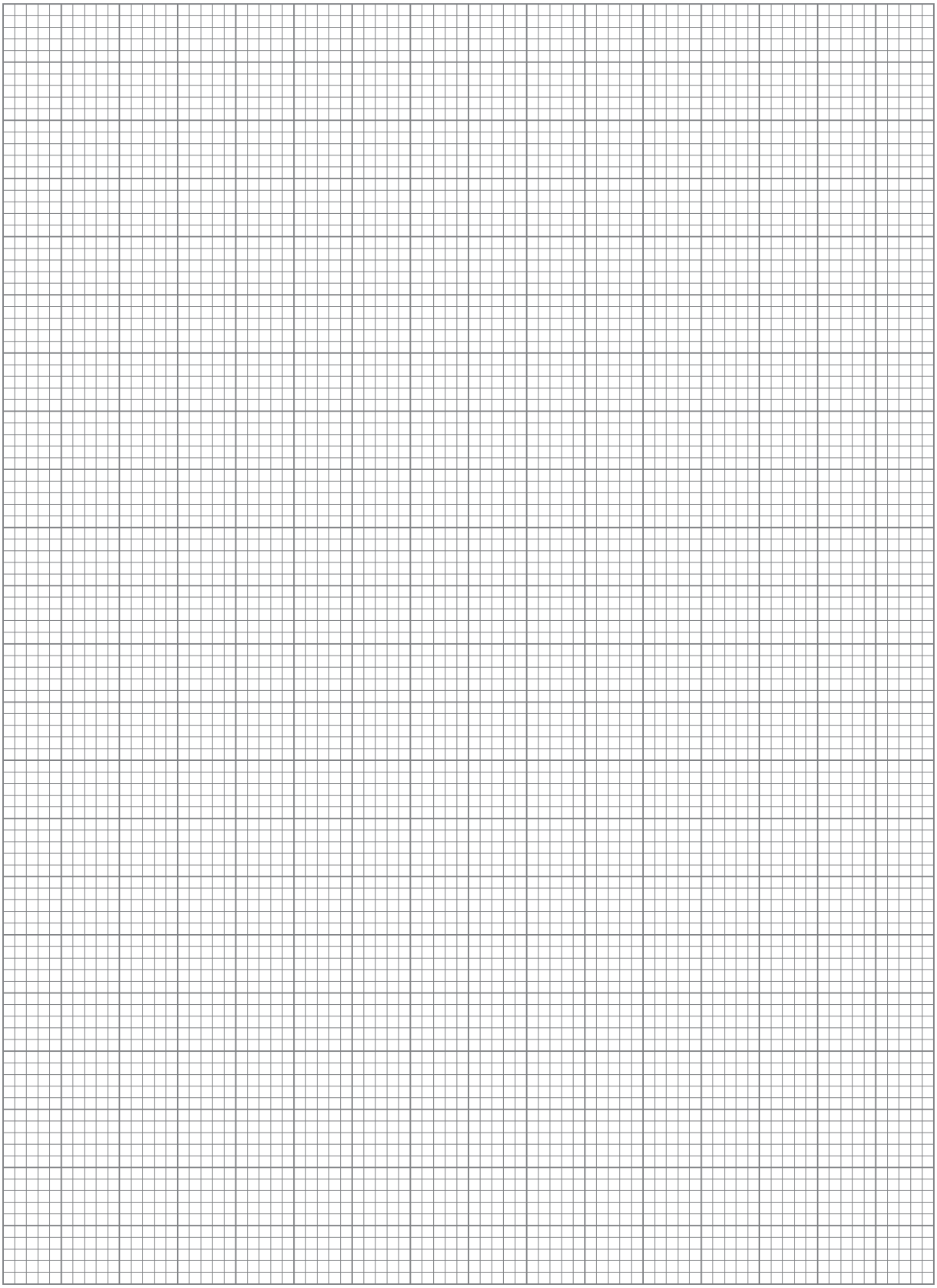
(Question 1 continues overleaf)

(c) (i) Using the graph paper below, select an appropriate technique to present some or all of the data from your table. Your graph **must** be relevant to your aim/hypothesis. [7]

Title of Graph: _____



(ii) Describe what your graph shows and comment on its usefulness in relation to the aim of your fieldwork.

[4]

(iii) With reference to any **one** of the variables displayed on your graph, describe how this data was collected.

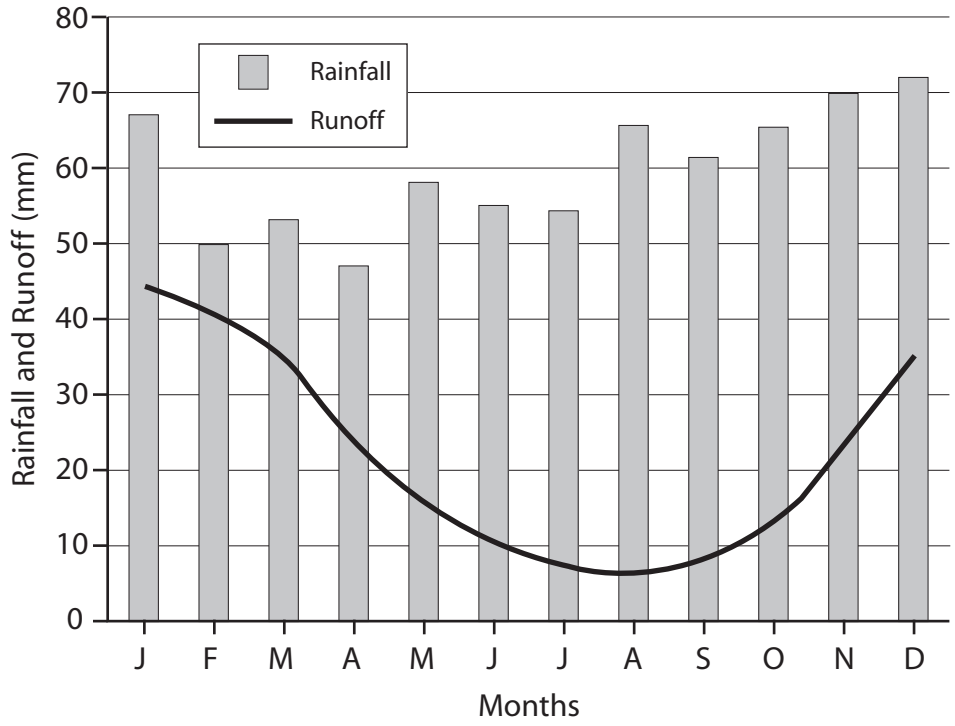
[3]

Section B

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

2 Study **Resource 2** which shows the annual rainfall and runoff for the River Thames at Abingdon.

Resource 2



Source: data from Institute of hydrology (1996)

(a) (i) In which months is rainfall at its highest and lowest? State the rainfall amount.

Highest rainfall is in _____ at _____ mm

Lowest rainfall is in _____ at _____ mm [2]

(ii) Describe and explain the changes that occur in runoff throughout the year.

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_____ [4]

(b) Draw an annotated diagram or diagrams in the box below and use this to help you to explain the formation of **either** an oxbow lake **or** levees. [6]

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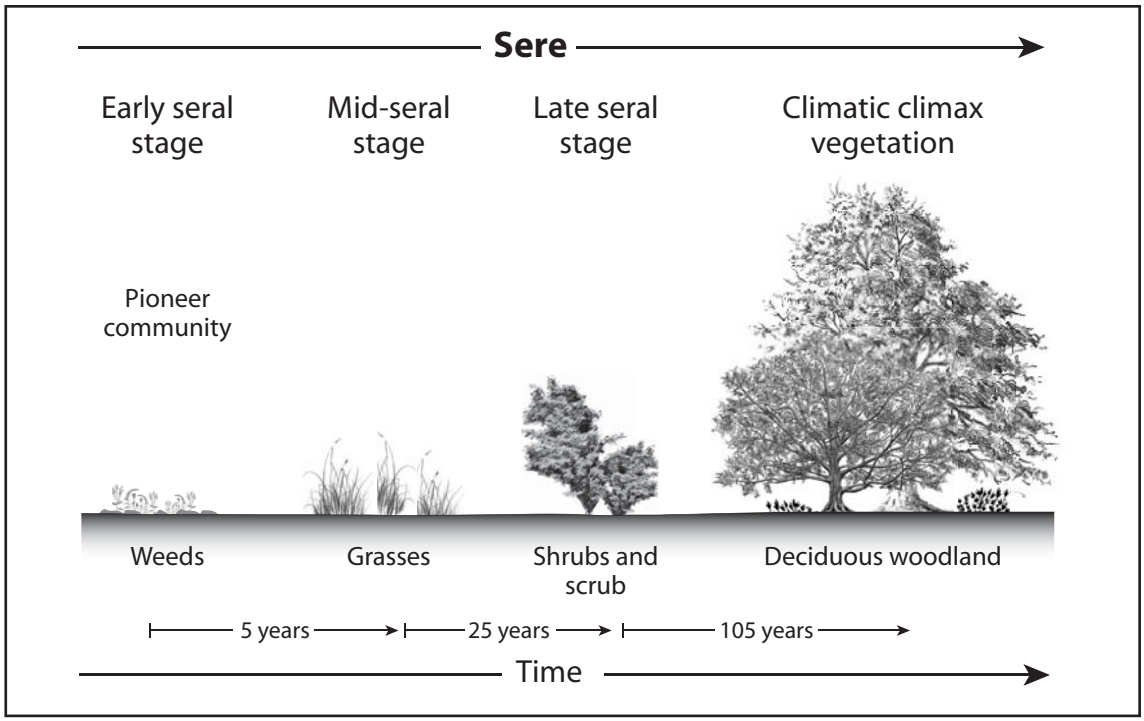
(Questions continue overleaf)

3 Study **Resource 3A** which shows plant succession in an abandoned field in a Western European climate, e.g. Ireland.

Resource 3A



(a) (i) State what is meant by the term **climatic climax vegetation** and explain **one** way in which it can be replaced by a plagioclimax vegetation.

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_____ [4]

(ii) For a plant succession you have studied, describe **two** ways in which the pioneer community in the first seral stage differs from the climatic climax vegetation.

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(b) Study **Resource 3B** which lists some characteristics of natural mid-latitude grasslands.

Resource 3B

1. Soil surface composed of a dense root mat present throughout the year.
2. Root mat retains moisture.
3. Soil particles bound by roots.
4. Little loss of nutrients by leaching.
5. Soil rich in organic matter.
6. Limited soil loss by wind erosion.

Explain how the monoculture of annual cereals would change **any two** of the characteristics in **Resource 3B**.

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_____ [4]

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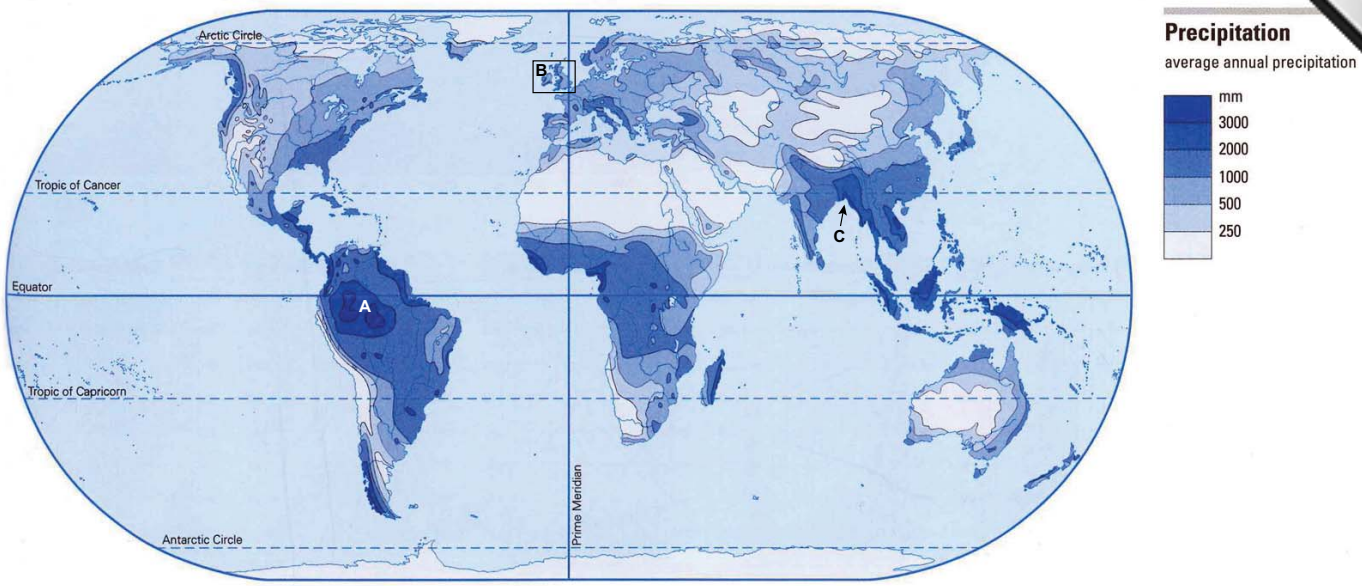
(Questions continue overleaf)

4 Study **Resource 4** which shows annual world precipitation totals.

Resource 4



Map from Oxford Student Atlas edited by Patrick Weigand (OUP, 2005), copyright © Oxford University Press 2002, reprinted by permission of Oxford University Press

Examiner Only	
Marks	Remark

(a) (i) Describe the pattern of world precipitation shown on **Resource 4**.

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_____ [4]

(ii) For **either** A, B or C on **Resource 4**, explain **one** cause of precipitation in that area.

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(b) Describe where, and under what conditions, hurricanes form.

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_____ [6]

Section C

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

5 "Flooding can have beneficial and detrimental effects on people, property and the land." Discuss this statement with reference to your case study of a large scale drainage basin or its delta. [12]

6 Describe the physical characteristics of a small scale ecosystem you have studied, and explain the operation of the food chains within your chosen ecosystem. [12]

7 Contrast the effects of low and high pressure systems on the weather of mid-latitude areas. [12]

Question Number

Number your answers clearly

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