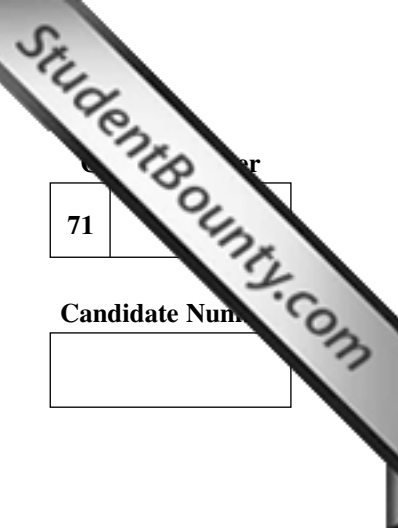




Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
January 2009



71

Candidate Number

Geography

Assessment Unit AS 1

assessing

Module 1: Themes in Physical Geography

[ASG11]



MONDAY 26 JANUARY, AFTERNOON

TIME

1 hour.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
Answer **all three** questions in **Section A** and **any two** questions from **Section B**.
Write your answers to **Section B** on the lined paper at the end of this booklet.

INFORMATION FOR CANDIDATES

The total mark for this paper is 60.
Quality of written communication will be assessed in **all** questions.
Figures in brackets printed down the right-hand side of 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	

Total Marks	
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Section A

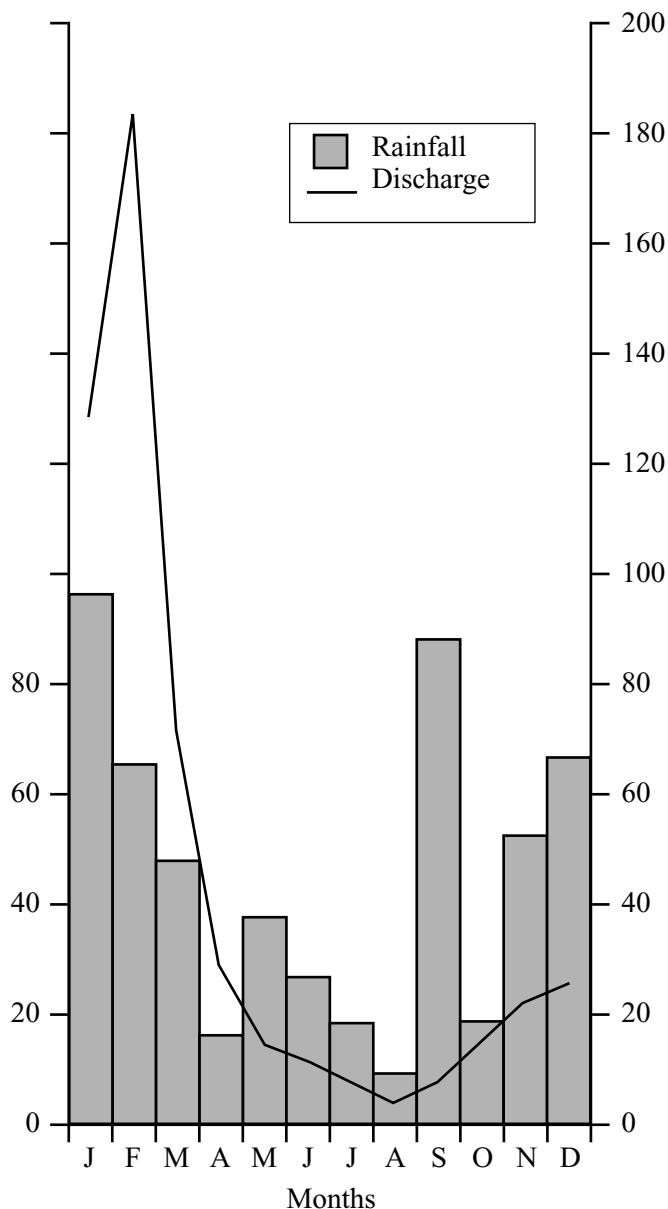
Answer **all three** questions in this section

- 1 (a) Explain why the drainage basin is an open system.

[2]

- (b) Study **Resource 1** showing the average monthly precipitation and discharge for the River Ouse in England in 1995.

Resource 1



© Geography in Focus by Ian Cook published by Pearson Education Ltd ISBN 1873929919

(i) With reference to the drainage basin system, explain the term **discharge**.

[2]

(ii) State the amount of peak discharge and the month in which it occurred.

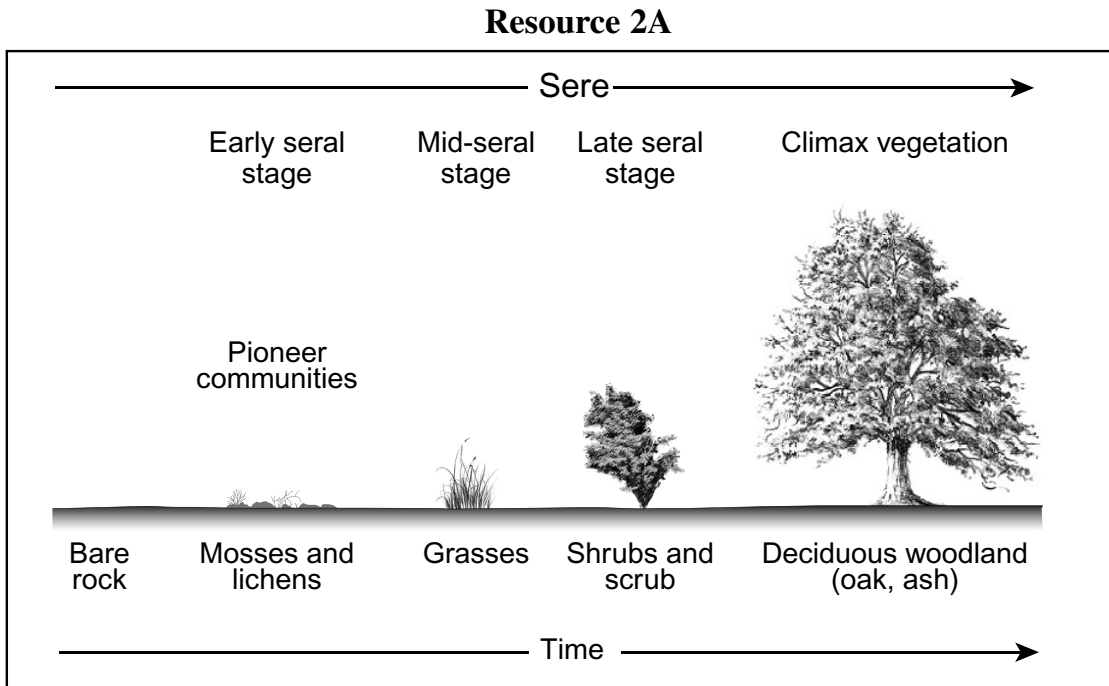
Discharge _____

Month _____ [1]

(iii) Using **Resource 1**, describe and explain the pattern of discharge for the River Ouse during 1995.

[5]

2 (a) Study **Resource 2A** showing plant succession in an area of Northern Ireland.



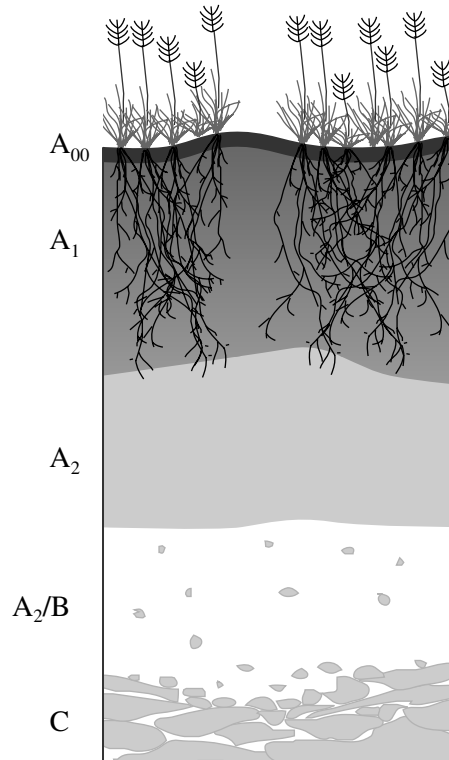
Adapted from the article Eco-tourists save forest "jewels" from bulldozers by Lewis Smith © The Times 10/2007

With reference to **Resource 2A**, describe and explain how plant communities develop through a series of changes.

[4]

(b) Study **Resource 2B** which shows a typical mollisol/chernozem soil profile.

Resource 2B



(i) On **Resource 2B**, label the following soil characteristics:

- direction of soil water movement in spring
- zone of calcareous nodules

[2]

(ii) Explain how any **two** characteristics of mollisols/chernozems reflect the climate and/or natural vegetation of their location.

1. _____

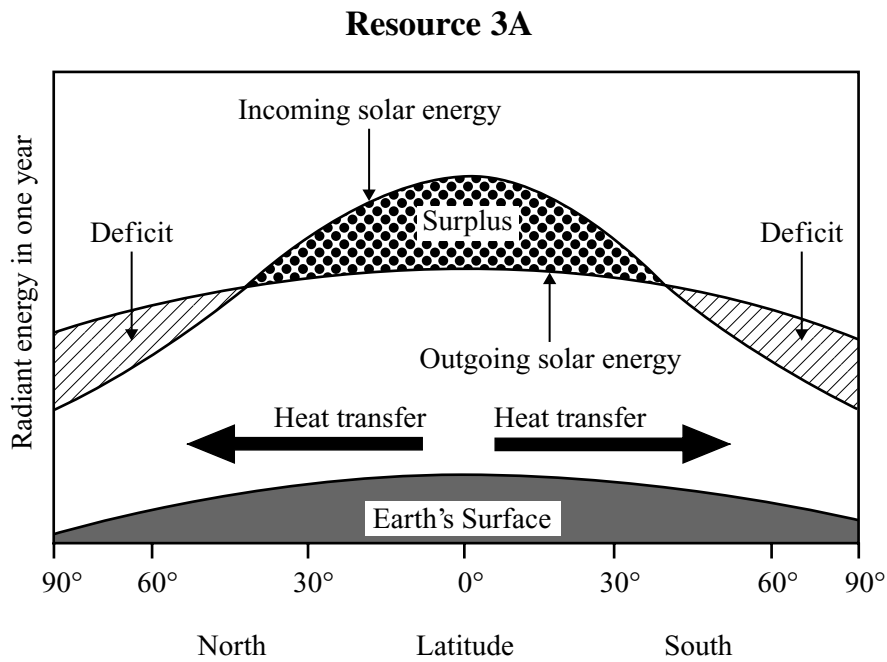
2. _____

_____ [4]

(iii) Explain **one** cause of soil erosion in the areas where mollisols/chernozems are found.

_____ [2]

3 (a) Study **Resource 3A** showing the earth's energy balance.



Í 'Ncpfo ctniCUI gqi tcrj { 'd{ 'Olej cgnTcy 'cpf 'Xlevqtke 'Dhuj qr. 'r vdrkúj gf 'd{ 'Eqmku'Gf wecvkqpcnNyf. 'RUDP '22254877; 7

(i) Using information from **Resource 3A**, explain what is meant by **global energy balance**.

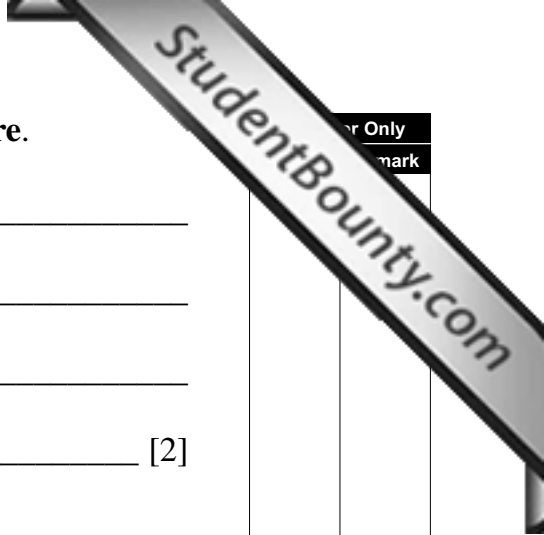
[2]

(ii) Describe how any **one** horizontal heat transfer operates to maintain the global energy balance.

[2]

(b) Explain what is meant by the term **dew point temperature**.

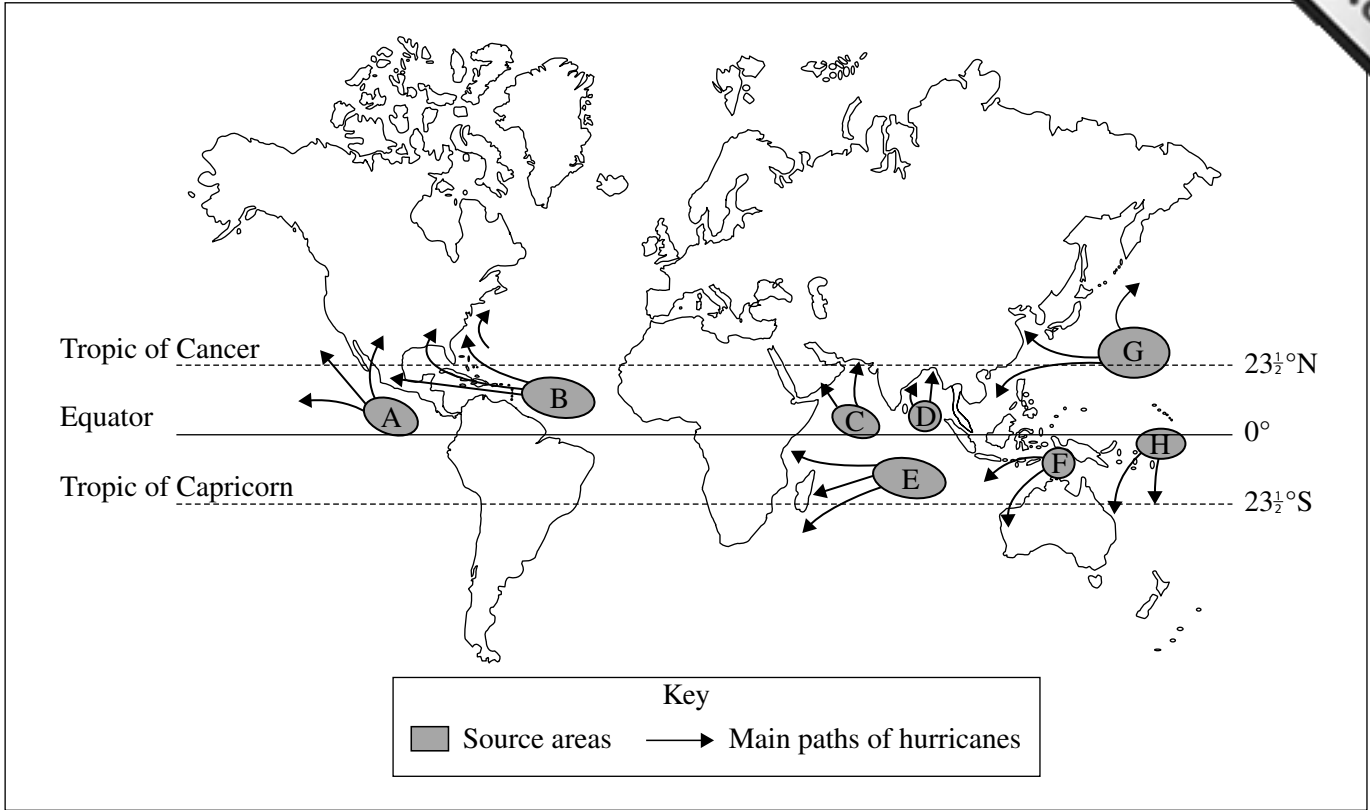
[2]



Question Only	Mark

(c) Study **Resource 3B** showing the areas where hurricanes form (source areas) and the main paths of hurricanes.

Resource 3B



© Reproduced with the permission of Nelson Thornes Ltd from EPICS - Natural Hazards by Simon Ross, ISBN 978 0 7487 3951 6, first published in 1998

(i) Using information from **Resource 3B**, describe the areas where hurricanes form.

[2]

Examiner Only	
Marks	Remark

(ii) Describe **three** conditions which must exist in these areas for hurricanes to develop successfully.

1. _____

2. _____

3. _____

_____ [3]

(iii) Which of the source areas A to H is the origin of the hurricane you have studied?

Name of hurricane _____ [no mark]

Source area _____ [1]

Section B

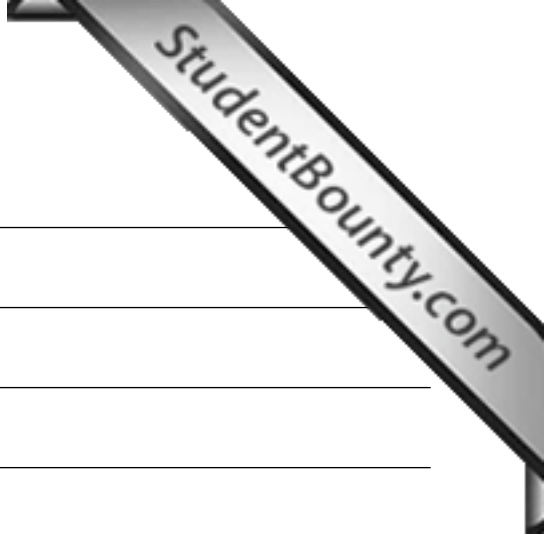
Answer **any two** questions from this section

- 4 With reference to your case study of flooding in a large-scale drainage basin or delta, describe the effects of flooding on people, property and the land. [12]

- 5 With reference to the local scale ecosystem you have studied, describe its physical characteristics and explain how they influence its biotic components. [12]

- 6 Describe and explain how the weather conditions experienced during both winter and summer anticyclones affect human environments. [12]

Number your answers clearly



Lined writing area consisting of 20 horizontal lines for student answers.

Number your answers clearly

THIS IS THE END OF THE QUESTION PAPER

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