OCR
RECOGNISING ACHIEVEMENT

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
Advanced Subsidiary GCE

GEOLOGY 2832

The Rock Cycle – Processes and Products

Thursday **25 MAY 2006** Afternoon 1 hour

Candidates answer on the question paper.
Additional materials:
Ruler (cm/mm)

Candidate Name	Centre Number	Candidate Number

TIME 1 hour

INSTRUCTIONS TO CANDIDATES

- Write your name in the space above.
- Write your Centre number and Candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers in the spaces provided on the question paper.
- Read each question carefully and make sure you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [ ] at the end of each question or part question.
- You will be awarded marks for the quality of written communication where this is indicated in the question.

FOR EXAMINER'S USE		
Qu.	Max.	Mark
1	16	
2	17	
3	17	
4	10	
TOTAL	60	

This question paper consists of 12 printed pages.

Registered Charity Number: 1066969
[Turn over

Answer all the questions.

1 Below is a diagram of the rock cycle.

A diagram has been removed due to third party copyright restrictions

Details: A diagram of the rock cycle

(a) (i) Complete the table below using the diagram of the rock cycle.

location	process or product
A	
B	
C	
D	

[4]

(ii) Name two processes that occur after deposition to produce rock group D.

process 1 .....

process 2 ..... [2]

(b) Explain how the crystal grain size of igneous rocks is related to the depth at which they crystallised.

.....

.....

.....

..... [2]

(c) Below are thin section drawings of three rocks.

An image has been removed due to third party copyright restrictions

Details: An image of thin section drawings of three rocks

(i) To which of the three groups of rocks does rock E belong?

..... [1]

(ii) Describe the texture of rock F.

.....

.....

.....

..... [2]

(iii) Rock F was formed after the weathering and erosion of rock E.
Explain why rock F contains quartz only.

.....

.....

.....

..... [2]

(iv) Describe the processes responsible for the shape of the quartz grains in rock **F**.

.....

.....

.....

..... [2]

(v) To which of the three groups of rocks does rock **G** belong?

..... [1]

[Total: 16]

2 The diagrams below show four sedimentary structures (not all the right way up) which may be used as way up indicators.

A diagram has been removed due to third party copyright restrictions

Details: A diagram of four sedimentary structures

(a) (i) Name the sedimentary structures shown.

H …… J ……

K …… L …… [4]

(ii) Which of the diagrams show sedimentary structures that are not the right way up?

…… [1]

(iii) Explain how you can tell that these structures are not the right way up.

……

……

……

…… [2]

(b) (i) Describe the processes of formation of sedimentary structure K.

……

……

……

…… [2]

[Turn over

(ii) Describe the processes of formation of sedimentary structure L.

.....

.....

.....

..... [2]

(c) The diagrams below show two different types of limestone.

A diagram has been removed due to third party copyright restrictions

Details: A diagram showing two different types of limestone

(i) Name limestone M and limestone N.

M ..... N ..... [1]

(ii) State the water depth at which limestone M is generally formed.

..... [1]

(iii) Describe how the concentric layers in limestone M are formed.

.....

.....

.....

..... [2]

(d) Describe the weathering process carbonation.

.....

.....

.....

..... [2]

[Total: 17]

3 **(a)** **(i)** Define the term *delta.*

.....

.....

.....

..... [2]

(ii) Complete the table below to show the different parts of a delta.

layer	rock types
	coal, channel sandstones and seat earth
foresets	
bottomsets	

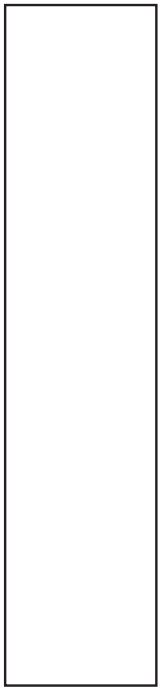
[3]

(b) **(i)** Define the term *cyclothem.*

.....

..... [1]

(ii) Draw a vertical section to show deltaic cyclothems.
Label the layers of the delta, using the information from the table in **(a) (ii)**.



[2]

(c) The following diagram shows a forest growing in a deltaic environment.

A diagram has been removed due to third party copyright restrictions

Details: A diagram showing a forest growing in a deltaic environment

(i) Name the climatic zone where coal is likely to form.

..... [1]

(ii) Name and describe the process that changes plant material into coal.

.....

.....

..... [2]

(iii) Explain why there are many layers of coal in deltaic sequences.

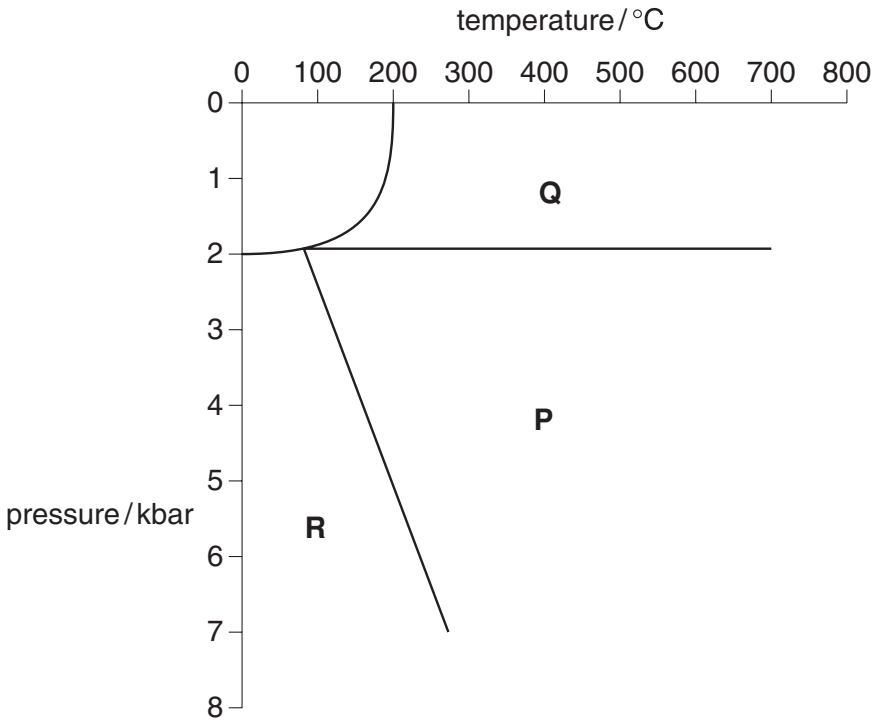
.....

.....

.....

..... [2]

(d) Below is a pressure temperature graph showing the types of metamorphism.



(i) Complete the following table by entering the correct letters from the graph.

	letter
burial metamorphism	
regional metamorphism	
thermal metamorphism	

[2]

(ii) Explain why you chose the areas on the graph for thermal and regional metamorphism.

.....

.....

.....

..... [2]

[Total: 17]

4 In this question, two marks are available for the quality of written communication.

Using diagrams, explain the differences between sills and lava flows.

For Examiner's Use

.... [8]

Quality of Written Communication [2]

[Total: 10]

END OF QUESTION PAPER