



Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2014

Centre Number

71

Candidate Number

Biology
Assessment Unit AS 1
assessing
Molecules and Cells
[AB111]

ML

FRIDAY 13 JUNE, AFTERNOON

TIME

1 hour 30 minutes, plus your additional time allowance.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

There is an extra lined page at the end of the paper if required.

Answer **all eight** questions.

You are provided with **Photograph 1.3** for use with Question 3 in this paper.

Do not write your answers on this photograph.

INFORMATION FOR CANDIDATES

The total mark for this paper is 75.

Section A carries 60 marks. Section B carries 15 marks.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

You are reminded of the need for good English and clear presentation in your answers.

Use accurate scientific terminology in all answers.

You should spend approximately **20 minutes** on Section B.

You are expected to answer Section B in continuous prose.

Quality of written communication will be assessed in Section B, and awarded a maximum of 2 marks.

**For Examiner's
use only**

Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	

**Total
Marks**

Examiner Only	
Marks	Remark



[1]

(b) Describe the behaviour of the chromosomes between stage **A** and stage **B**.

[4]

8975.08 ML

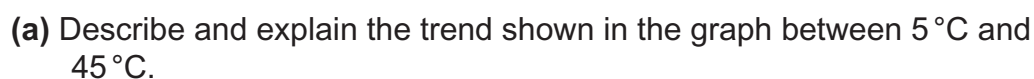
C _____

Answer _____ μm [3]

[2]

[1]

[Turn over



[4]8975.08 ML

A detailed diagram of a complex virus structure. The virus has a spherical shape with a thick, grey, textured outer layer labeled "Lipid envelope". Embedded in this envelope are numerous "Envelope proteins", which are depicted as Y-shaped or T-shaped structures with a bulbous head and a short stalk. Inside the lipid envelope is a "Capsid", represented by a hexagonal shape with a thick black border. Within the capsid, there are three wavy, grey lines representing "DNA". Labels with leader lines point to each of these components: "Envelope proteins", "Lipid envelope", "Capsid", and "DNA".

(a) Use the information in the diagram to complete the following.

-

-
- [2]

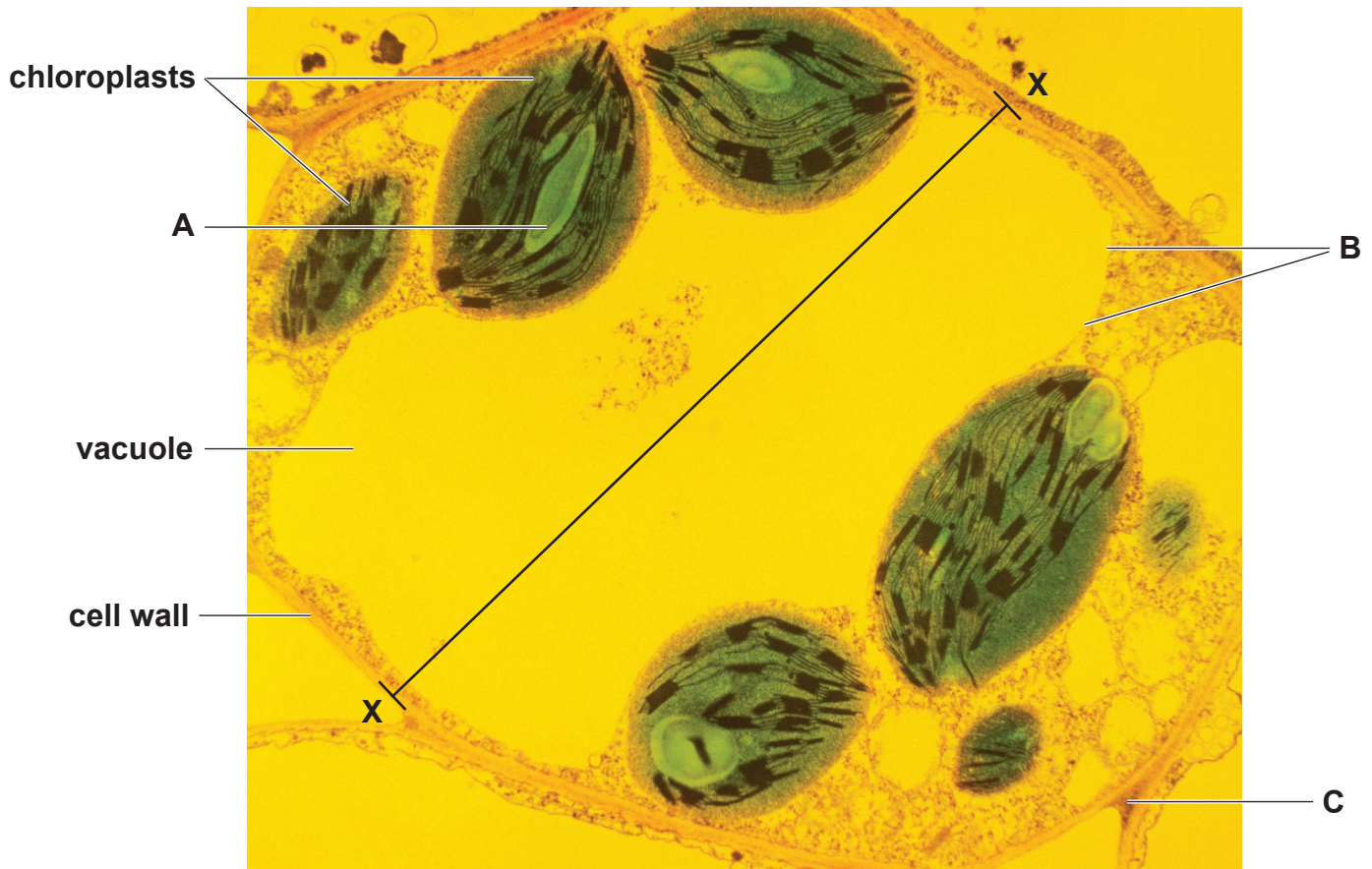
Examiner Only	
Marks	Remark

THIS IS THE END OF THE QUESTION PAPER

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GCE Biology Advanced Subsidiary (AS)
Assessment Unit AS 1
Molecules and Cells
Summer 2014

Photograph 1.3
(for use with question 3)



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Magnification $\times 7500$