Centre Number						Candidate Number					

Surname		Other Names	

	For Teacher's Use

Notice to Candidate. The work you submit for assessment must be your own. If you copy from someone else or allow another candidate to copy from you, or if you cheat in any other way, you may be disqualified.

Candidate Declaration. I have read and understood the Notice to Candidate and can confirm that I have produced the attached work without assistance other than that which is acceptable under the scheme of assessment.

Candidate Signature		Date	

Section	Mark
Section 1 (/20)	
Section 2 (/30)	
TOTAL (max 50)	

AQA

General Certificate of Secondary Education
June 2012 and January 2013

Science A SCA4/PU1.1

Controlled Assessment ISA PU1.1   Solar Cells   Section 1
For moderation in May 2012 or January 2013

For this paper you must have:
- your Candidate Research Notes
- a pencil and a ruler.
You may use a calculator.

Time allowed
- 45 minutes

Instructions
- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions in the spaces provided.
  Do not write outside the box around each page
  or on blank pages.
- Do all rough work in this book. Cross through
  any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The maximum mark for Section 1 is 20.
- The maximum mark for the Controlled
  Assessment is 50.
- You are reminded of the need for good English
  and clear presentation in your answers.

Details of additional assistance (if any). Has the candidate received any help or information from anyone other than the subject teacher(s) in the production of this work? If the answer is yes, give the details below or on a separate page.

Yes ☐   No ☐

Teacher Declaration:
I can confirm that the candidate's work was conducted under the conditions laid out by the specification. I have authenticated the candidate's work and am satisfied that to the best of my knowledge the work produced is solely that of the candidate.

Signature of teacher .... Date ....

SCA4/PU1.1

Hypothesis: *The output voltage from a solar cell depends on the area of the solar cell exposed to the light.*

1   Think about the research that you did to find out how to test this hypothesis.

Name **two** sources that you used for your research.

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Which of these sources was the more useful and why?

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(3 marks)

2   In this investigation, you will need to change the area of the solar cell exposed to the light.

Describe briefly how you would do a preliminary investigation to find a suitable interval to use for this variable.

You should also explain how the results of this preliminary investigation will help you to decide on the best interval to use.

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(3 marks)

3 *In this question you will be assessed on using good English, organising information clearly and using scientific words where appropriate.*

Describe how you plan to do your investigation to test the hypothesis given.

You should include:

- the equipment that you plan to use
- how you will use the equipment
- the measurements that you are going to make
- how you will make it a fair test
- a risk assessment.

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Continue your answer on the next page

Turn over ▶

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(9 marks)

4   Do you think that the level of light in the room in which you are going to do the investigation will be important?

Explain the reason for your answer.

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(3 marks)

5   Make sure that you hand in your Candidate Research Notes and your blank table for the results with this paper.

You will be awarded up to two marks for your table.

(2 marks)

20

END OF QUESTIONS

There are no questions printed on this page

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED