

GENERAL CERTIFICATE OF SECONDARY EDUCATION

B763

FURTHER ADDITIONAL SCIENCE B

Cameras

CONTROLLED ASSESSMENT

CANDIDATE STIMULUS MATERIAL: Part 3: Analysis and evaluation

Candidates answer on this answer booklet

OCR Supplied Materials:

None

Other Materials Required:

- Graph paper
- Calculator
- Written work from Part 1 and Part 2

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|--------------------|--|-------------------|--|
| Candidate Forename | | Candidate Surname | |
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|---------------|--|--|--|--|--|------------------|--|--|--|--|
| Centre Number | | | | | | Candidate Number | | | | |
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INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your centre number and candidate number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Attach to this booklet:
 - your research (Part 1 of the task)
 - your plan for the investigation and your results (Part 2 of the task).

INFORMATION FOR CANDIDATES

- Your quality of written communication is assessed in questions marked with a pencil (✎).
- You may use a scientific calculator.
- You are advised to show all the steps in any calculations.
- The total number of marks for the task is **48**.
- This document consists of **4** pages. Any blank pages are indicated.

| Skill quality | Max | Mark |
|----------------------------|-----------|------|
| Researching | 6 | |
| Planning | 6 | |
| Collecting data | 6 | |
| Managing risk | 6 | |
| Processing data | 6 | |
| Analysing and interpreting | 6 | |
| Evaluating | 6 | |
| Justifying a conclusion | 6 | |
| TOTAL | 48 | |

Cameras

When a convex lens is used to form a real image on a screen the distance between the object and the lens affects the distance between the lens and the place where the image is in focus.

1 Process the data you have collected and plot a graph(s) to show the results of your investigation.

2 Describe any patterns or trends in your results. Comment on any unexpected results.

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3 Compare results of your own investigation (Part 2) with the data from other groups and any information you found in your research (Part 1).

Suggest and explain reasons for any similarities and differences.

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- 6 'Fixed-focus' cameras are designed to produce sharp images of most objects, without the need to make any adjustments. These cameras cannot, however, be used to produce a clear photograph of objects that are close to the camera.

Use the results from your investigation and your research to describe evidence that does or does not support this statement.

Use relevant scientific explanations in your answer.

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