

Questions 28–31

Complete each sentence with the correct ending, **A–G**, below.

Write the correct letter, **A–G**, in boxes 28–31 on your answer sheet.

- 28 Nobel found that adding chemicals 30 Nobel found that adding brick dust
 29 Nobel found that adding sawdust and paper 31 Nobel found that mixing nitroglycerine with packaging

- | | |
|---|---|
| A decreased the energy of the explosion. | E made the process safer. |
| B lengthened the time required. | F increased the flammability of the mixture. |
| C made the process unworkable. | G resulted in lower reliability. |
| D reduced the manufacturing costs. | |

Questions 32–37

Look at the following statements (Questions 32–37) and the list of options below.

Match each statement with the correct option, **A, B** or **C**.

Write the correct letter, **A, B** or **C**, in boxes 32–37 on your answer sheet.

NB You may use any letter more than once.

- 32 He recognised the significance of an unexpected result.
 33 He depended on the help of colleagues to solve a problem.
 34 He used different methods to find a solution to the problem.
 35 He was encouraged to do this research by his government.
 36 He received an award in recognition of his scientific work.
 37 He worked for a long time to find a way of keeping a process under control.

List of Options

- A** true of both Daguerre and Nobel
B true of neither Daguerre nor Nobel
C true of only one of them

Questions 38–40

Complete the summary below.

Choose **NO MORE THAN TWO WORDS** from the text for each answer.

Write your answers in boxes 38–40 on your answer sheet.

Daguerre's Experiments

Daguerre's work illustrated the comment made by Louis Pasteur that in order to take full advantage of a lucky discovery, scientists need to have a **38** He found that exposure to **39** had the desired effect on a silver-coated photographic plate, but only to a very limited extent. To his great surprise the image then became much clearer when it was stored in a cupboard. By a process of elimination, he discovered that collodion and alcohol were not responsible for this improvement. In fact, the removal of all the **40** did not affect the quality of the image. It was some spilt mercury that had produced the effect.