Write your name here

Surname	Other names

Centre Number | Candidate Number

Edexcel GCSE

History B (Schools History Project)

Unit 3: Schools History Project Source Enquiry

Option 3A: The transformation of surgery, c1845–c1918

Wednesday 19 June 2013 – Afternoon

Time: 1 hour 15 minutes

Paper Reference

5HB03/3A

You must have:
Sources Booklet (enclosed)

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*

Information

- The total mark for this paper is 53.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed.
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over

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Answer ALL questions.

Look carefully at the background information and Sources A to G in the Sources Booklet and then answer Questions 1 to 5 which follow.

1 Study Source A.

What can you learn from Source A about blood transfusions in the late nineteenth century?

(6)

(Total for Question 1 = 6 marks)

2 Study Source B.

What impression has Dr Blundell tried to give about blood transfusions in the first half of the nineteenth century? Explain your answer, using Source B.

(8)

(Total for Question 2 = 8 marks)

3 Study Sources B, C and D.

How far do Sources B, C and D suggest that surgeons' use of blood transfusions was dangerous before 1909? Explain your answer, using these sources.

(10)

(Question 3 continued)

(Question 3 continued) .....

(Total for Question 3 = 10 marks)

4 Study Sources E and F.

Which of Sources E or F is more useful to the historian who is investigating the use of blood transfusions during the First World War? Explain your answer, using Sources E and F.

(10)

(Question 4 continued)

(Question 4 continued) .....

(Total for Question 4 = 10 marks)

***5 Study Sources D, F and G and use your own knowledge.**

Spelling, punctuation and grammar will be assessed in this question.

'The First World War (1914–18) was the main reason why so much progress was made in the use of blood transfusions in the early twentieth century'.

How far do you agree with this statement? Use your own knowledge, Sources D, F and G and any other sources you find helpful to explain your answer.

(16)

(Total for spelling, punctuation and grammar = 3 marks)
(Total for Question 5 = 19 marks)

TOTAL FOR PAPER = 53 MARKS

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Sources Booklet

Paper Reference

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Do not return this Sources Booklet with the question paper.

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Background information

By the end of the nineteenth century there had been little progress in dealing with the problem of blood loss in surgery. A number of problems still needed to be solved.

This paper presents you with sources about efforts to deal with blood loss and gives you the opportunity to decide for yourself whether the First World War (1914–18) was the main reason why so much progress was made in the use of blood transfusions in the early twentieth century.

Source A: A photograph of a blood transfusion taken in the late nineteenth century.

Source B: From an article on blood transfusions by Dr Blundell published in *The Lancet*, a leading medical journal, in the first half of the nineteenth century. He was the first surgeon to perform a successful person-to-person blood transfusion.

> Operations that need the transfusion of blood are probably rare. However, in some cases they are needed otherwise the patient will die. There are also many more cases where transfusion could be used to replace large blood losses even when the patient is not in danger of dying. At present there is no clear evidence that transfusion has been fatal, however this might be a possibility. Perhaps we should only use transfusions where it seems the only hope for the patient is that we throw blood into the veins.

Source C: From *A Short History of Blood Transfusion* by P. Learoyd, published in 2006.

> Disagreements existed throughout the nineteenth century regarding the use of transfusion. Different views can be found in the records of the Medical Society of London. Many surgeons believed that transfusions were dangerous and that they may have caused the death of some patients on which they were used. They also claimed that most of the patients who had benefited from transfusions would have recovered anyway. However, some surgeons argued strongly in favour of transfusions, noting that the dangers of blood loss were far greater than the possible danger from transfusion.

Source D: From a speech about the work of Dr Karl Landsteiner. It was given when he was awarded the Nobel Prize for Medicine in 1930.

> In 1901–03 Landsteiner pointed out that problems could occur when blood is transfused from one human to another. His opinions, however, received little attention until 1909. In that year Landsteiner classified the blood of human beings into the well-known A, B, AB and O groups. He showed that problems arise when one person is transfused with the blood of another person who has a different blood group.

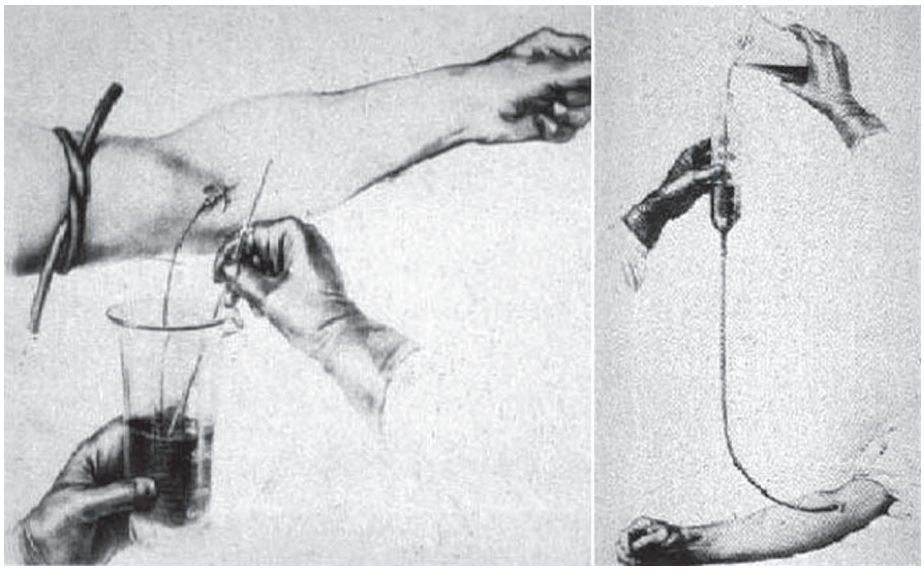
Source E: From the diary of Oswald Robertson on 30 November 1917. He was an army surgeon working on the Western Front during the First World War.

> Men were horribly mutilated - many were dying when brought into the ward. The beds were filled and we began putting stretchers on the floor. Blood everywhere - clothes soaked in blood, pools of blood in the stretchers, streams of blood dropping from the stretchers to the floor. My rubber apron was one solid red smear. All we could do was try to stop the bleeding and get the patients as comfortable as possible.
>
> I could only transfuse an occasional patient. The majority had to take their chance and go through the operation as best they could.

Source F: From *A Brief History of Blood Transfusions*, an article published in 2005 in a scientific journal, *The Biomedical Scientist*.

> The use of blood transfusions advanced with the outbreak of the First World War. This was mainly due to the new knowledge of matching different blood groups and the use of sodium citrate to stop blood clotting. Sodium citrate allowed blood to be stored for use during transfusions. Before this, transfusion was only possible using specially treated blood, and by direct person-to-person techniques.

Source G: A drawing published in a scientific journal. This shows the method of using sodium citrate in blood transfusions, developed by Dr Richard Lewisohn in 1915.



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