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.
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 operations in the early nineteenth century? (6)
2 Study Source B.

What impression was the artist trying to give of this operation? Explain your answer, using Source B.

(8)
3 Study Sources A, C and D.

How far do Sources C and D suggest that operations were now much safer than those described in Source A? Explain your answer, using these sources.

(10)
(Question 3 continued)
4 Study Sources E and F.

Which of Sources E or F is more useful to the historian who is enquiring into the use of anaesthetics in operations? Explain your answer, using Sources E and F.

(10)
(Question 4 continued)
(Question 4 continued)

(Total for Question 4 = 10 marks)
*5 Study Sources E, F and G and use your own knowledge.

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

‘Religious belief was the main reason why there was so much opposition to the use of anaesthetics.’

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

(16)
Background information

One of the major breakthroughs in surgery in the mid-nineteenth century was the development of anaesthetics. However, there was considerable opposition to the use of anaesthetics.

This paper presents you with sources about the development and use of ether and chloroform and gives you the opportunity to decide for yourself why there was so much opposition to their use.


There was no way of completely removing the pain suffered by a patient. It was also not possible to use transfusion to replace the blood lost. Robert Liston was a famous London surgeon who once amputated a leg in two-and-a-half minutes. However, he worked so fast that he accidentally cut off his patient’s testicles as well. During another high speed amputation, Liston cut off the fingers of his assistant. He also slashed the coat of a spectator who, fearing he had been stabbed, dropped dead with fright. Worse was to follow: both the assistant and the patient died as a result of the operation.

Source B: A painting of Robert Liston operating in 1846. This was the first use of ether in an operation to amputate a leg. The apparatus on the table was used to give ether to the patient.

(Source: © Wellcome Library, London)
Source C: From an article by Dr J H Bennett about the use of chloroform. It was published in the *London Journal of Medicine* in 1850.

We must accept that the use of chloroform does have a certain amount of risk. This risk is only very slight. This is shown by the very small number of deaths that have been recorded. I do not believe the number of deaths is high enough to stop us making use of the benefits of chloroform.

Source D: From *The Discovery of Ether* by William Hayden, published in 1896. Hayden was a surgeon. Here he is describing an early operation using anaesthetic.

The patient is lying down and is relaxed. She does not need to be surrounded by strong men to force her to keep still or to guard against unexpected accidents. The only people needed are the surgeon and his two assistants, who pass him the necessary surgical tools or help to stop the flow of blood. The surgeon is not forced to hurry by the pain felt by the patient to complete the operation as soon as possible. He can take his time and calmly go about his work, according to the needs of the operation, and make full use of the benefits provided by anaesthetics.
**Source E:** A drawing of the death of Hannah Greener. She died when she was given chloroform during an operation to remove an infected toenail in 1848. The drawing was published in a history of anaesthetics in 1868.

(Source: © Mary Evans Picture Library)

**Source F:** From *A Brief History of Medicine* by Paul Strathern, published in 2005. Here he is writing about the introduction of anaesthetics.

A newspaper headline announced ‘We have conquered pain!’ but people remained unconvinced. There was widespread opposition on religious grounds, especially about the use of anaesthetics during childbirth. According to the Bible, God had said childbirth would be accompanied by pain. More serious objections came from medical opposition to ether. It was found that ether could damage the lungs, and occasionally cause vomiting which, if it happened during an operation, could lead to the death of the patient.

**Source G:** From an article about chloroform written by James Simpson in 1860.

I have often feared that the lives of patients are sacrificed by the careless manner in which students and young surgeons sometimes place the damp folded cloth over the patient’s face. This does not give the patient enough air to breathe. I have no doubt that many of the deaths blamed on chloroform are really due to the incorrect administration of it.