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Examiners' Report June 2010

GCSE History 5HB03 3A

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Introduction

This was the first opportunity candidates had to sit this Schools History Project Source Enquiry paper. Most candidates were able to produce responses to questions that were worthy of at least some credit. Few candidates failed to achieve less than ten marks but none was able to achieve maximum marks. Many candidates found it difficult to access the highest levels in response to questions 4 and 5. In this the first series there was some evidence that candidates experienced some difficulty with time especially so with question 5. In many cases this was because candidates wrote excessive amounts in response to earlier questions which carried significantly fewer marks. Candidates should allocate the amount of time they spend on an individual question to the mark tariff the question carries. Experience of tackling questions under examination conditions would help improve the ability of candidates to respond appropriately.

Question 1

The majority of candidates answered this question well. Many were able to make one or more inferences and use details from the source in support. Weaker candidates tended to paraphrase the source or list facts they had gained from the source. Some wrote at length on Lister using their own knowledge. The latter not only failed to address the question set but also wasted valuable time that would have been better spent on later questions on the paper. Those who identified the significance of the breakthrough achieved by Lister, the use by him of the scientific method of experimentation and the keeping of accurate records were able to access the full mark range available. However too many relied on regurgitating the numbers instead of explaining what they told us of his work or its importance.

The following candidate's response achieved a Level 3 maximum mark. However the first four paragraphs do not address the question and are largely wasted effort. Only at the bottom of the first page and on the second does the candidate focus on the question, making effective inferences, supporting them from the source.

Top tip: Answer the question set. Make inferences from the source; such as his work was a breakthrough in surgery, he used scientific methods of experimentation and accurate record keeping.

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 the work of Joseph Lister?

(6)

In this source answer I am going to use source A to see what I can learn about Lister. By looking at the content and info provided:

Some firstly from what I know Lister was a surgeon who found carbolic spray in 1867 with the help of many other such as Louis Pasteur's germ theory in 1861. From this he found an antiseptic as he thought microbes in the air caused infections - called Carbolic acid, however some surgeons opposed.

Source A is a two way table which has the statistics about amputations Joseph Lister performed between 1864 and 1870.

From source A I can learn Joseph Lister performed amputation. I can learn the from the headline of the source. This tells me Lister did alot of amputations as part of his work, telling me, he worked as a surgeon.

The source tells me that in 1864-66 the 35 operations Lister did without carbolic acid, 16 patients died and 19 recovered. From this I can learn that Lister's work included alot of deaths

which may have lead to him interested and investigate infectious diseases. From these figures I can learn that most patients died during operations involving amputations, this not only tells me, but Lister too that there is something wrong, and there is a problem. This tells me Lister's work included experiments as Lister has recorded statistics before and after the use of Carbolic acid, and from the source the number of deaths has greatly decreased between 1867-70 when Lister had created carbolic acid, this tells me Lister's work was effective and much needed in surgery as too many people died. This also

tells me Lister's work was a huge advance in surgery as it increased the amount of recovered patients. incredibly.

In conclusion, from source A I can learn that Lister did experiment before and after with the use of Carbolic acid ~~and~~ to ensure what the thought was correct. I can also learn that Lister's work was successful in reducing infections as it decreased the death rate and increased the recovered rate, therefore making Lister's work a huge advance in surgery.

This response is lengthy but does reach level 3. It contains several inferences that are supported by detail from the source.



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Examiner Comments

The response identifies Lister's work as a huge advance. It also recognises that Lister was keen to experiment and produced a much needed drop in infection.



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Examiner Tip

Remember to make at least one inference and use the source to support it. Just repeating detail from the source will not go beyond level 1.

Question 2

In this question those candidates who achieved good marks recognised that the model represented a half way step on the way to fight infection following surgery. Generally, those who did were able to achieve at least level 3 marks. Others either mentioned the message as showing the poor state of surgery or the improvements made by Lister. Many were able to make valid comments from the source such as the use of the carbolic spray and clean sheets but noted that the surgeons still wore their own clothes during the operation. Others commented on the fact that this operation was conducted using anaesthetic. However a good number demonstrated confusion over the use and value of antiseptics and anaesthetics. Some wrote that carbolic acid had put the patient to sleep and allowed the surgeons to take their time over the operation. Some commented that operations were not now conducted in public operating theatres. Blood loss was identified as a problem evidenced by the blood stained sheets though this often took them down something of a dead end with over lengthy comment on Landsteiner and blood transfusion. Many found it difficult to summarise the complete message conveyed by the model. Few were able to comment on the nature of the source itself and a significant number ignored the provenance given in the attribution and thought it was a painting. Surprisingly few made reference to the fact that the model was an exhibit in the Science Museum

2 Study Source B.

What impression of operations has been created by the display shown in Source B?
Explain your answer, using Source B.

(8)

The first impression I get from source B is that the operation is remarkably calm and controlled. The first implication that I learn before even looking at the date is that anaesthetics have already been discovered and successfully used, as the patient is showing no sign of movement or pain.

Secondly, I get the impression that this is a very important ~~oper~~ and slightly complex operation as there are 4 men in the room, and they are all linked in some way to the operation itself.

The source shows the antiseptic spray ~~is~~ on a stand. It is at hands reach and the source makes an inference that it has already been used. Although antiseptic spray is and has been used, all the people involved in the operation are wearing ordinary, everyday cloths, so, it seems that by 1877, some way of trying to control and defeat infection has been developed and used, the aseptic environment of everything being absolutely sterile and

completely bacteria free has not been accomplished. So far, the impression made by the source is that it is an operation that is using effective equipment and surgery has advanced alot at this point but it still has other points that could improve the conditions and overall death rate of the operation. ~~is~~

Lastly, I can see a significant amount of blood coming from the small area ~~is~~ of surgery. This implies that little has been done yet in the world of surgery to control blood loss.

This source is a display in a science museum in 1877. This is quite an important thing, important enough to display in a science museum. But, it is displayed in 1877, this is around the time when antiseptics ~~are~~ were fairly new so ~~for~~ people in a science museum will want to create a certain impression of the effectiveness of antiseptics. So, this source may be slightly biased for antiseptics and their ~~to~~ effect on an operation.

This response which reached the top level focuses on the stage in the development of antiseptic surgery associated with Lister's use of a carbolic acid spray.



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Examiner Comments

The answer mentions developments indicated such as the use of anaesthetics and the antiseptic spray. The response also indicates what remains to be done and the problem of surgeons continuing to wear ordinary clothes. The importance of the development is emphasised also by the fact that this model is displayed in a major museum.



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Examiner Tip

Read the provenance given carefully and use it in your answer.
Avoid using too much of your own knowledge which is not linked to the message or impression given.

Question 3

Many candidates failed to make an overall judgement on “How far” all three sources supported the idea that Lister’s ideas were accepted by other surgeons. Many responses were by nature mechanical with Source B says, Source C says and Source D says. Having gone through each source individually there was a tendency to attempt to cross reference at the end. However, although many appreciated the need to cross reference, fewer were able to do so confidently or effectively. Source B, often dealt with well in responses to question 2, presented a bigger obstacle in responses to question 3. Here the nature of the source as a reconstruction using a model was very rarely mentioned. Again many candidates failed to read the provenance of each source carefully. Many thought that Hartley was against Lister’s methods, having not appreciated that he was the author of a history book. While many analysed each source in turn, cross referencing was often focused of the nature of each source. Again much of this was of the simplistic learnt response variety. Historians are not it would seem very useful or reliable. In many responses they are secondary sources and they were not there and therefore can not be relied upon. Some top level answers commented on the fact that although the information in Source D, was against Lister, the fact that he was a professor of surgery meant that his ideas were accepted by some even if not always acted upon. Other perceptive comments included the view that Source C was published in a medical magazine which was informative and widely circulated. The latter showed that Lister’s ideas were widely known and accepted by many.

3 Study Sources B, C and D.

How far do Sources B, C and D suggest that Lister’s ideas were accepted by other surgeons? Explain your answer, using these sources.

(10)

Source B shows that Lister's methods were used in surgical procedures because it shows an operation taking place and an antiseptic spray bottle spraying out antiseptic onto the patient. This shows that Lister's methods were accepted and used in surgical practices. Source C also proves that Lister's methods were accepted and used. Source C was an extract report written by a doctor at the Dowlais Iron Works. It states that 'the use of Carbolic acid in the treatment of wounds and compound fractures created a revolution in surgery'.

THIS SHOWS LISTER'S WORK WAS TRUSTED AND USED ALSO BY DOCTORS IN OTHER PLACES.

SOURCE D DOES NOT SHOW ACCEPTANCE OF LISTER'S METHODS IT SHOWS THAT PEOPLE OF ~~THE~~ ^{THE} ~~THE~~ ~~HOSPITAL~~ ~~AT~~ ~~ST~~ ~~THOMAS'~~ ~~HOSPITAL~~ ~~IN~~ ~~LONDON~~ ~~DID~~ ~~NOT~~ ~~THINK~~ ~~THAT~~ ~~METHODS~~ ~~SHOULD~~ ~~BE~~ ~~USED~~ - ~~THE~~ ~~SURGEONS~~ ~~BELIEVED~~ ~~THAT~~ ~~THESE~~ ~~NEW~~ ~~METHODS~~ ~~WERE~~ ~~ODD~~ ~~AND~~ ~~THAT~~ ~~LISTER'S~~ ~~METHOD~~ ~~TOOK~~ ~~TOO~~ ~~LONG~~. THIS SHOWS THAT NOT ALL PEOPLE APPROVED TRUSTED OR ACCEPTED LISTER'S METHODS.

This clip is typical of many responses that describe what each source in turn shows. As such it reaches a mid level 2 mark



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Examiner Comments

The candidate outlines what each of the sources shows but there is little attempt at cross referencing. No mention is made of the support or otherwise of the sources in terms of their nature, origin or purpose.



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Examiner Tip

Combine comment on the content of each source together with its nature, origin and purpose to access the highest marks. Develop techniques to demonstrate effective cross referencing skills. "All three sources suggest Lister's ideas were well known but B and C suggest they were accepted while D on the other hand says they were not only rejected but were ridiculed".

Question 4

“Which of the Sources is more useful to the historian?” type questions. Sources should be evaluated here in terms of their usefulness in answering a specific question as well as commenting on their nature, origin and provenance. This type of question did cause some candidates real problems. This question requires the evaluation of evidence in context in order to achieve higher-level marks. Questions require candidates to examine the nature (type of source), origin (who produced it and when) and purpose (what reason explains why it was produced). Candidates who did well tended to see sources having value but some more than others. Some candidates spent time on the identification of primary and secondary sources accompanied by rather simplistic learnt responses concerning value. A disturbing number regard contemporary sources as being more reliable and useful than those written years later by historians. Overall responses varied a great deal but this was generally one of the weakest responses made by candidates on the paper. Many candidates just dealt with one source only, or wrote a list of what was in the sources without linking it to the question asked. Judgements, if present were often simplistic “Therefore I think Source is more useful because it is primary” or “secondary sources are useless because they weren’t there”

Many candidates did little more than produce a good deal of paraphrased source material. Most students seemed to be in the L2 range for analysis of content but tended to struggle with the evaluation of its nature, origin and purpose. In terms of Source E, many commented on the fact that it came from an eyewitness, stating that it came from one doctor and one hospital. Rarely did any candidate raise the question how typical was it. For Source D many mentioned hindsight, the fact that it could be checked and was researched. Candidates would do well to consider what a historian needs to do and bear this in mind when investigating an aspect of the past.

Question 5

Seeing as this was the last question it was often tackled reasonably well though some showed signs of running out of time. The majority of candidates who attempted the question focused solely on change in surgical practice. Fewer were able to access the higher levels of the mark scheme by doing so within the context of time. Those that did tended to make use of Source A but then often failed to mention the “time” period from the other sources. Better responses made effective use of their own knowledge as well as the sources but many tended to trawl through the sources one after the other. Occasionally aseptic techniques were referenced but rarely the move from antiseptic towards aseptic techniques. Lister’s success rate in A was seen as generally applicable which made it difficult for them to address the issue of shortness of time. Far fewer candidates were able to merge content and nature in their source analysis in the extended question.

Many candidates appreciated that Lister’s own personality got in the way of his success in promoting anti septic and aseptic techniques. However fewer showed awareness that other surgeons were developing their own safer surgical procedures, so misunderstanding the relevance of source F. A significant number of responses made use of their own knowledge but saw the question as an opportunity to write everything they knew about the development of surgery during the period.

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

'Lister's antiseptic methods changed surgical practice in a short period of time.'

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

(16)

Plan

- *Black Period of surgery - many deaths
 - ⇒ other problems.
 - likely to be reduced quickly?
 - death rates had been lower before
 - Lister's antiseptic
 - sewers in Carlisle
 - 1864 → 1870, 6 years
 - dramatic fall, source A.
 - spray pump, means of use.
 - Pasteur, 1861
 - germs + bacteria
 - reason for usage / acceptance.
 - *Opposition
 - source F
 - new ideas source D
 - Lister alone?
 - Communication
 - source G = German surgeon
 - needed to be used worldwide
- before methods truly changed.

Although Lister's methods changed surgery, other factors such as communication, conflicting views, and other the work of other individuals also either contributed to or hindered the acceptance and subsequent use of his work. Ultimately, however, for Lister's

ideas and methods to change surgery in a short period of time, they needed to be clearly communicated in an equally short time.

Lister's methods originated from observing how carbolic acid sprayed on the sewers in Carlisle affected the smell, and applied these ideas to surgery, where he specialized in amputations. He also provided a means of using his new idea, enabling others to use his ^{antiseptic} methods and therefore change their surgical practice. He applied them to his own surgery, and as is seen in source A enabled death rates to fall from ~~19~~¹⁶ out of 35 to 6 out of 40 within just 6 years.

However, many people such as the surgeons in source D, did not accept Lister's methods, because they had little reason to use them, because Pasteur did not find the cause of infection until his germ theory in 1861, meaning that while some people did not accept Lister's "new ideas" for a longer time. While Lister's methods changed surgery, it was not necessarily in a short period of time.

This may have been partially because many people, including Robert Lawson in source F, opposed Lister's ideas, because there were many other problems involved in surgery besides infection, including pain and bloodloss. Source F does not believe that "Lister cured the problem;" and this may have been because

While death rates were reduced, people died both before and after Lister's methods were introduced because there was still a lack of a complete understanding of infection, and while Robert Koch advocated the use of aseptic surgery Lister did not. This meant that despite the new means of preventing infection, it was still a minor problem because bacteria were still present in the surgery, giving people a reason to disagree with Lister, his methods, and whether they changed surgery dramatically in a short period of time.

Lister's methods needed to be clearly communicated before they could be accepted and consequently change surgery, and source 6 provides evidence of both communication and acceptance from at least one other medical professional. G. Strömyer was a "keen follower" of Lister's methods, which implies that he applied them to his own methods, changing his methods of surgery during the time ^{when} ~~that~~ Lister was working.

Therefore, although others contributed to Lister's methods and some improved on them, and while not everyone agreed with their use because of many ~~many~~ reasons, for them to change surgery at all they needed clear and successful communication for them to ~~truly~~ truly change surgery. Advances in technology, both in medical and communication, enabled the ideas to spread more quickly.

both between surgeons and researchers, enabling
Lister's methods to change surgery in a relatively
short period of time.

This response is a solid top level argument that focuses on the question and makes effective use of both sources and own knowledge.



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Examiner Comments

The last question has a tariff of 16 marks and it is important that candidates allow themselves enough time to tackle it well. The key is the effective deployment of own knowledge and the use of relevant sources to answer the question set.



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Examiner Tip

Allow enough time to answer this question.
This is one question that does not require comment on or evaluation of the nature, origin and purpose of the sources used.
Make obvious use of sources as well as knowledge of your own in your answers.

Grade Boundaries

Grade	Max. Mark	A*	A	B	C	D	E	F	G	U
Raw boundary mark	50	38	34	30	26	22	19	136	13	0
Uniform boundary mark	100	90	80	70	60	50	40	30	20	0-19

A* is only used in conversion from raw to uniform marks. It is not a published unit grade.

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