



**General Certificate of Secondary Education
June 2012**

GCSE History A 40401A

Unit 1 Option A

Medicine Through Time

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the students' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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A: INTRODUCTION

- **Consistency of Marking**

Consistency of marking is of the essence in all public examinations. This factor is particularly important in a subject like History which offers a choice of specifications and a choice of options within them. It is therefore of vital importance that assistant examiners apply this marking scheme as directed by the Principal Examiner in order to facilitate comparability with the marking of all the other History specifications and options offered by the AQA.

- **Subject Content**

The revised specification addresses subject content through the identification of 'key questions' which focus on important historical issues. These 'key questions' give emphasis to the view that History is concerned with the analysis of historical problems and issues, the study of which encourages all candidates, but particularly the more able, to make judgements grounded in evidence and information.

- **The Assessment Objectives (AOs)**

Assessment Objectives		% weighting
AO1	Recall, select and communicate their knowledge and understanding of history	30
AO2	Demonstrate their understanding of the past through explanation and analysis of: <ul style="list-style-type: none"> • key concepts: causation, consequence, continuity, change and significance within an historical context • key features and characteristics of the periods studied and the relationship between them 	30
AO3	Understand, analyse and evaluate: <ul style="list-style-type: none"> • a range of source material as part of an historical enquiry • how aspects of the past have been interpreted and represented in different ways as part of an historical enquiry 	40

- **Levels of Response Marking Schemes**

The mark scheme which follows is of the 'levels of response' type showing that students are expected to demonstrate their mastery of historical skills in the context of their knowledge and understanding of History. All candidates take a common examination paper – there is no tiering. Consequently, it is reasonable to expect to encounter the full range of attainment and this marking scheme has been designed

to differentiate students' attainment by **outcome** and to reward **positively** what the students know, understand and can do.

Before scrutinising and applying the detail of the specific mark scheme which follows, assistant examiners are required to familiarise themselves with the instructions and guidance on the general principles to apply in determining into which level of response an answer should fall and in deciding on a mark within that particular level.

Good examining is, ultimately, about the **consistent application of judgement**. This mark scheme provides the necessary framework for exercising that judgement but it cannot cover all eventualities. This is especially so in a subject like History, which in part relies upon different interpretations and different emphases given to the same content.

B: QUESTION TARGETS & LEVELS OF RESPONSE

- **Question Targets**

The mark scheme for each question is prefaced by an assessment objective 'target'. This is an indication of the skill which it is expected candidates will use in answering the question and is directly based on the relevant assessment objectives. However, it does not mean that other answers which have merit will not be rewarded.

- **Identification of Levels of Response**

There are several ways in which any question can be answered – in a simple way by less able candidates and in more sophisticated ways by candidates of greater ability. In the marking scheme different types of answers will be identified and will be arranged in a series of levels of response.

Levels of response have been identified on the basis that the full range of candidates entered for the GCSE examination will be able to respond positively. Each 'level' therefore represents a stage in the development of the candidate's **quality of thinking**, and, as such, recognition by the assistant examiner of the relative differences between each level descriptor is of paramount importance.

- **Placing an answer within a Level**

When marking each part of each question, examiners must first place the answer in a particular level and then, and only then, decide on the actual mark within the level, which should be recorded in the margin. **The level of response attained should also be indicated at the end of each answer.** In most cases, it will be helpful to annotate the answer by noting in the margin where a particular level has been reached, eg Level 1 may have been reached on line 1, L3 on line 5 and L1 again on line 7. When the whole answer has been read and annotated in this way, the highest of the Levels **clearly attained** and **sustained** should be awarded. Remember that it is often possible to reach the highest level **without** going through the lower levels. Marks are **not cumulative** for any question. There should be no 'totting up' of points made which are then converted into marks. Examiners should feel free to comment on part of any answer if it explains why a particular level has been awarded rather than one lower or higher. Such comments can be of assistance when the script is looked at later in the awarding process.

If an answer seems to fit into two or more levels, award the higher or highest level.

- **What is a sustained response?**

By a **sustained response**, we mean that the student has **applied** the appropriate level of thought to the **particular issues** in the sub-question.

A response does not necessarily have to be sustained throughout the whole answer, but an answer in which merely a few words seem to show a fleeting recognition of historical complexity is not sufficient to attain a higher level.

In some cases, as you read an answer to a sub-question, it will be clear that particular levels have been reached at certain points in the answer. If so, remember to identify them in the margin as you proceed. At the end of the sub-question, award the highest level that has been sustained.

In other cases you may reach the end of the sub-question without having been able to pinpoint a level. In such cases, simply record the level awarded at the end of the sub-question.

C: DECIDING ON MARKS WITHIN A LEVEL

A particular level of response may cover a range of marks. Therefore, in making a decision about a specific mark to award, it is vitally important to think *first* of the **lower/lowest mark within the level**.

In giving more credit with the level, examiners should ask themselves several questions relating to student attainment. The more positive the answers, the higher should be the mark awarded. We want to avoid 'bunching' of marks. Levels mark schemes can produce regression to the mean, which should be avoided. At all times, therefore, examiners should be prepared to use **the full range of marks** available for a particular level and for a particular question. Remember – mark **positively** at all times.

Consider whether the answer is:

- precise in its use of supporting factual information.
- appropriately detailed.
- factually accurate.
- appropriately balanced, or markedly better in some areas than in others.
- set in the historical context as appropriate to the question.
- displaying appropriate **quality of written communication skills**.

Note about Indicative Content.

The mark scheme provides **examples of historical content** (indicative content) which students may deploy in support of an answer within a particular level. Do bear in mind that these are **only examples**; exhaustive lists of content are not provided so examiners might expect some candidates to deploy alternative information to support their answers.

This indicative content must **not** however determine the level into which an answer is placed; **the student's level of critical thinking determines this**. Remember that the **number** of points made by a candidate may be taken into account only **after** a decision has been taken about the quality (level) of the response.

- **Some things to remember**

Mark positively at all times.

Do **not** be afraid to award maximum marks within a level where it is possible to do so. Do not fail to give a maximum mark to an appropriate answer because you can think of something (or the marking scheme indicates something) that **might** be included but which is missing from the particular response.

Do **not** think in terms of a model answer to the question. Every question should be marked on its merits.

As a general rule, give credit for what is accurate, correct or valid.

Obviously, **errors can be given no credit** but, at the same time, the existence of an error should not prejudice you against the rest of what could be a perfectly valid answer.

It is important, therefore, to use the full range of marks where appropriate.

Do not use half marks.

D: SOME PRACTICAL POINTS

- **Answers in note form**

Answers in note form to any question should be credited in so far as the student's meaning is communicated. You must not try to read things into what has been written.

- **Diagrams, etc**

Credit should be given for information provided by the students in diagrams, tables, maps etc, provided that it has not already been credited in another form.

- **Answers which run on to another sub-section**

If a student starts to answer the next sub-section in an earlier one, by simply running the answer on, give credit for that material in the appropriate sub-section.

- **Answers which do not fit the marking scheme**

Inevitably, some answers will not fit the marking scheme but may legitimately be seen as worthy of credit. Assess such answers in terms of the difficulty/sophistication of the thought involved. If it is believed that the 'thought level' equates with one of the levels in the marking scheme, award it a corresponding mark.

Make sure you identify such cases with an A (for alternative) in your sub-total, eg as B2A/3. Also write a brief comment to explain why this alternative has been awarded.

If in doubt, **always** telephone your Team Leader for advice.

Paper 1

Question 1

(a) What does **Source A** suggest about public health in Ancient Greece?
 Explain your answer using **Source A** and **your knowledge**. **4**

Target: **Target: Knowledge and understanding applied to comprehend and draw an inference from an historical source (AO1 & 3).**

Candidates either submit no evidence or fail to address the question. **0**

Level 1: Answers that select details from the source or show some knowledge of Greek public health.

Eg the picture shows men exercising.
 they went to the gym.
 ordinary Greeks followed Hippocrates.
 they washed.
 they could check out injuries. **1**

Level 2: Answers that draw an informed inference based on the source and/or own knowledge.

Eg the Greeks thought exercise was good for your health so they trained and took part in the Olympic Games.
 there are only men in the picture so women would not expect to stay healthy.
 they thought keeping clean was important. **2-3**

Level 3: Answers that develop a complex, informed inference based on the source and/or own knowledge.

eg the Greeks used a combination of healthy diet, keeping clean and exercise to try and stay healthy. Hippocratic books laid down what should be eaten, drunk to stay healthy. They said what you should not do. It seems that this advice was limited to men as women were not allowed to take part in the Games.
 poor people had to do the best they could.
 lack of government intervention.
 most suggestions only worked for the rich who could afford to follow Hippocratic ideas. **4**

(b)	<p>How does Source B suggest that public health in 19th Century Britain was different from Ancient Greece? Explain your answer using Sources A and B and your knowledge</p>	6
	<p>Target: Knowledge and understanding applied to comprehend and draw inferences from two historical sources (AO1/2/3).</p> <p>Candidates either submit no evidence or fail to address the question.</p>	0
	<p>Level 1: Answers that select details from Source B. Eg they wanted clean water. they wanted to stop the link between water and cholera.</p>	1-2
	<p>Level 2: Answers that provide a simple comparison based on the details of both sources. Eg clean air/dirty air. sparsely populated/over-crowded. no industry/industry.</p>	3-4
	<p>Level 3: Answers that develop an understanding or draw informed inferences about different ways of improving health based on the details of both sources. From Source A students may draw on the advice within the Hippocratic books, which favoured the rich who could afford the time for an exercise regime and healthy diet. From Source B students may link the political demands of Victorian London. Eg the Greeks thought about the importance of fresh food and exercise but did little in the way of improving public health by building water pipes and sewerage systems. This was left to the Romans. However, by the nineteenth century there was a growing feeling that the government should do something. The cartoonists of the day showed how angry people in London were that nothing had been done. They expected the government to take responsibility, whereas in the Greek period the emphasis was on the role of the individual. Inference on pre/post-industrial life. Inference from Source B with passing reference to Source A is L3/5. L3 – candidates should discuss the response in context of 1832/19th century.</p>	5-6

(c)	Why was public health different at these times? Explain your answer using Sources A and B and your knowledge .	8
	Target: Explanation and understanding of the different ideas and attitudes and how they might change over time (AO1/2/3).	
	Candidates either submit no evidence or fail to address the question.	0
	Level 1: Answers that select details from sources Or answers that say how the sources are different. Source A is from 400BC and Source B is from 1832. Source A is a modern painting. Source B is from a newspaper (cartoon). The Greeks kept themselves fit. The nineteenth century people just complained a lot. The answer demonstrates simple understanding of the rules of spelling, punctuation and grammar. It is generally coherent but basic in development.	1-2
	Level 2: Answers showing simple reasoning about different attitudes based on changes over time, place or author. eg Greeks believed in the importance of individuals helping themselves. The Victorians believed in government help. NB Place chronological narrative at this level. The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is reasonably well organised and presented in a clear and effective manner.	3-5
	Level 3: Answers showing developed reasoning about different attitudes based on changes over time, place or author. eg Greeks depended on the ideas written in Hippocratic books. The Greeks did not have the medical knowledge, which showed the links between poor water supply and sewerage disposal. They did not have the skills or the stable government needed for a wide range of public works. The Romans did. By the nineteenth century medical knowledge had improved and people expected governments to act. Once people like John Snow had proved the link between water supply and diseases like Cholera many expected the government to act. However, not everyone wanted to see these improvements if it was going to cost them money. Medical knowledge and understanding really improved especially after Pasteur's Germ Theory, Edwin Chadwick and the new Public Health Acts became law. Developed reasoning considers 1832. NB Question is on public health. Reward knowledge on treatment of disease only when clearly linked to development of public health. The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is well organised with an appropriate form and style of writing. Some specialist vocabulary is used.	6-8

- (d) Throughout history there have been many factors that helped to improve public health. How important have governments been in improving public health compared with other factors? 8
- Explain your answer. You may use **Sources A, B and C** and your **knowledge**.
- Target: An understanding and evaluation of causation (AO1/2/3).**
- Candidates either submit no evidence or fail to address the question. 0
- Level 1: Answers that provide general statements, describe single factors or factual details about Public Health.**
 Covers a single factor; Government, technology, the individual, medical knowledge and communications.
 Eg John Snow was important as he showed the link between Cholera and poor quality water supply. 1-2
 The answer demonstrates simple understanding of the rules of spelling, punctuation and grammar. It is generally coherent but basic in development.
- Level 2: Answers that comment briefly on several factors, to do with improvement in Public Health.**
 May link together both ideas about the causes of poor public health and the solutions developed.
 Eg the role of Edwin Chadwick was important as he highlighted the squalor that most working class people lived in. War played a part because of the poor health of men volunteering for the Boer War. The Liberal Government thought it should try and do something. 3-4
 NB Several factors: expect 2 factors well covered or 3+ with general coverage.
 The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is reasonably well organised and presented in a clear and effective manner.
- Level 3: Answers that recognise and explain several factors to do with improvement in Public Health in specific detail.**
 Science and technology, the individual, chance, war and communications. Individual factors are covered and candidate begins to link together them effectively.
 Eg John Snow showed that poor water supply could spread Cholera. The discovery of the Germ Theory proved that his ideas were correct. Government reports showed how poor the poor really were and this led to the Liberal Party deciding to pass a series of reforms in the early 20th century. The industrial revolution helped create the problems in the towns and cities, but it also meant that they had the technology to provide fresh water and sewerage disposal systems. 5-6
 The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is well organised with an appropriate form and style of writing. Some specialist vocabulary is used.

Level 4: Answers that develop out of Level 3 and evaluate the relative importance of individual factors or come to a summary assessment about the factors involved or provide details of the links between factors.

May evaluate increased actions to improve Public Health by linking medical knowledge to technical ability and improved communications of medical ideas. The key will be the relative importance of each factor linked to the pace of change.

Eg the individual was the key to improvements in Public Health. Edwin Chadwick showed the upper classes what conditions for working people were really like. John Snow proved that the dreaded Cholera was a waterborne disease and Pasteur's Germ Theory confirmed this. In the twentieth century the work of Rowntree and William Beveridge helped governments decide on the role of Government in keeping society healthy.

Governments were important because they changed the law so that improvements happened and by the end of the twentieth century everyone expected the government to help. Source C shows government advice to prevent the spread of 'Swine Flu'. This shows that the people trusted the government and how important communications were in keeping the public healthy.

It was also important that the technology was in place. The ability to build better sewerage systems, better houses and provide free medical care was important in reducing deaths due to poor public health.

Warfare also played a part. The Boer war showed the health of men was poor; the Second World War encouraged the government to provide 'homes fit for heroes' and better medical care.

The most important factor was...

The answer demonstrates highly developed/ complex understanding of the rules of spelling, punctuation and grammar. It is well structured, with an appropriate form and style of writing. Specialist vocabulary is used effectively.

7-8

Question 2

(a) Choose **one** of the periods below.

- Sixteenth and Seventeenth Centuries 4
- Nineteenth Century

What were the main developments in surgery and anatomy in your chosen period?

Target: Understanding of the key features of the period (AO1).

Candidates either submit no evidence or fail to address the question. 0

Level 1: Answers that show recognition and simple understanding of the key period.

Gives detail of the periods of development in surgery and anatomy. 1-2
 eg Increased knowledge of anatomy (Andreas Vesalius).
 eg Understood more about the circulation of blood (William Harvey).
 eg They began antiseptic surgery and kept things clean.

Level 2: Answers that explain and show understanding in a broader context of the period.

Covers the range of improvements including: increased knowledge of anatomy; circulation of blood and some minor improvements in surgery such as the treatment of gunshot wounds, but also understands the broader context in terms of little real improvement in sixteenth and seventeenth centuries 3-4
 Broader context at this level – impact of developments.
 Broader context should be through detailed explanation.
 eg They began to use anaesthetics which gave surgeons the chance to take longer over operations. Operations became more complicated...

(b) Which of these periods was more important in the development of surgery and anatomy?

- Sixteenth and Seventeenth Centuries 8
- Nineteenth Century

Try to refer to **both** periods in your answer. Explain your answer.

Target: Evaluation and understanding of the key features of the period (AO1/2).

Candidates either submit no evidence or fail to address the question. 0

Level 1: Describes the importance of one period.

Eg in the nineteenth century there were great steps forward with the discovery of anaesthetics and antiseptic surgical methods. 1-2
The answer demonstrates simple understanding of the rules of spelling, punctuation and grammar. It is generally coherent but basic in development.

Level 2: Answers that comment briefly on both periods in a simple comparison.

Eg there were improvements in both periods. Without the improvements in anatomy discovered by Vesalius surgeons in the nineteenth century might not have know what they were doing when they operated. 3-5
Or answers that consider one periods' contribution to the improvements in surgery and anatomy in depth.

Eg the work of Pasteur in the nineteenth century was the most important. His theory was to lead to a wide range of improvements in surgery. Going from antiseptic surgery to aseptic surgery.
The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is reasonably well organised and presented in a clear and effective manner.

Level 3: Answers that explain and evaluate both periods' contribution to the improvements in surgery and anatomy in a comparison that is detailed.

Clearly evaluates the contributions of both periods. May come to a conclusion that one period was more significant than the other at certain times. 6-8
16th/17th century focus likely to be anatomy.
19th century focus likely to be surgery.
Linking both developments with judgement could be 7-8 marks.
The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is well organised with an appropriate form and style of writing. Some specialist vocabulary is used.

Question 3

(a) Choose one of the factors which influenced the development of surgery and anatomy:

- Warfare 4
- Science and technology

How did your chosen factor influence the development of surgery and anatomy?

Target: Understanding of the key features of the period (AO1).

Candidates either submit no evidence or fail to address the question. 0

Level 1: Answers that show recognition and simple understanding of the factor chosen.

Eg warfare: student outlines single specific events linked to warfare.
Eg Ambroise Pare had to act quickly when he ran out of boiling oil. He used a mixture including egg yolks and oil, and it did not affect the patient as much.

Eg science and technology: science played an important part with the invention of the microscope which helped scientists understand bacteria and infections. Technology meant that new instruments were made and machines like the antiseptic sprays.

1-2

Level 2: Answers that explain and show understanding in a broader context of the factor.

Warfare: Warfare was important at different times. Pare and gunshot wounds, the first use of penicillin and the development of blood transfusions and even plastic surgery all made a difference.

Science and technology: science developed X-rays, the mass production of penicillin and solving the problem of storing blood by adding a chemical to it. Modern drugs are also made out of chemicals.

Expect developments to be linked together.

Top of level when broader context is explained in detail.

3-4

(b) Which of these factors has been more important in the development of surgery and anatomy?

- Warfare
- Science and technology

8

Explain your answer. Try to refer to **both** factors in your answer.

Target: Evaluation and understanding of the key features of the period (AO1/2).

Candidates either submit no evidence or fail to address the question.

0

Level 1: Describes one factor: warfare or science and technology.

Eg warfare: gunshot wounds, blood transfusions, plastic surgery etc.

Eg science and technology: x-rays, penicillin, radiation treatment, plastic surgery etc.

1-2

The answer demonstrates simple understanding of the rules of spelling, punctuation and grammar. It is generally coherent but basic in development.

Level 2: Answers that comment briefly on both factors in a simple comparison.

Eg warfare and science and technology are both important. Science and technology gives the surgeons the ability to try things and warfare gives them the chance to practise their skills.

Or answers that consider one factor in depth.

Eg warfare has helped develop a wide range of techniques. The invention of x-rays by Wilhelm Rontgen in 1895 was important as it allowed doctors to see broken bones, but it was in the First World War that x-ray machines began to be used regularly to see where shrapnel and bullets were lodged in patients' bodies. In the Second World War the injuries to airmen allowed surgeons to develop the techniques needed to improve plastic surgery.

3-5

Archibald McIndoe used skin grafts to rebuild the faces and bodies of airmen who had suffered terrible burns during the war.

The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is reasonably well organised and presented in a clear and effective manner.

Level 3: Answers that explain and evaluate both factors contribution to the development of Surgery and anatomy in a comparison that is detailed.

Clearly evaluates both factors explaining the relative importance of each and may explain that the great advances in science and technology were the starting point for the work done during the wars themselves.

Eg warfare has helped develop a wide range of techniques. The invention of x-rays by Wilhelm Rontgen in 1895 was important as it allowed doctors to see broken bones, but it was in the First World War that x-ray machines began to be used regularly to see where shrapnel and bullets were lodged in patients' bodies. In the Second World War the injuries to airmen allowed surgeons to develop the techniques needed to improve plastic surgery. Archibald McIndoe used skin grafts to rebuild the faces and bodies of airmen who had suffered terrible burns during the war.

6-8

However, both developments did depend on the scientific developments which went before them such as understanding infections, aseptic and antiseptic surgery and the use of anaesthetics, as well as the technological improvements made with x-ray machines and of the scientific development like magic bullets being developed by chemists.

NB A judgement which is not supported by a comparison which is detailed should not be placed in L3.

The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is well organised with an appropriate form and style of writing. Some specialist vocabulary is used.

Question 4**(a)** Choose **one** of the periods below.

- Ancient Egypt and Ancient Greece **4**
- The Middle Ages (c500 -c1450)

How did people in your chosen period try to prevent the spread of disease and infection?

Target: Understanding of the key features of the period (AO1).Candidates either submit no evidence or fail to address the question. **0**

Level 1: Answers that show recognition and simple understanding of the key features of either period. **1-2**
 eg In the Middle Ages people still believed in evil spirits; the smell of bad air or punishments from God caused illness and disease.

Level 2: Answers that explain and show understanding in a broader context of the period. **3-4**
 Answers will show knowledge of some distinctive features of the period chosen:
 Eg evil spirits and the use of charms.
 Eg written medical books with herbal and magical cures.
 Eg clear instructions for doctors to follow.
 Eg Papyrus Ebers quoted.
 Eg the Egyptians believed that most illness was caused by evil spirits entering the body. Some of their cures were linked to charms and magic chants but some of their cures actually worked as they did use herbal cures. They had a tradition of writing down symptoms and treatments. This shows that some things did work. If a cure worked they had the records so that other doctors continued to use them. If a doctor failed to use the correct method and the patient died they did risk being executed so careful observation was important.
 Eg in the Middle Ages they believed in the power of evil spirits as well as natural causes of disease. However, there were few new ideas and many continued to follow the ideas of Hippocrates. The Church believed that punishments from God were major causes and that the cures might be rest, hospitalisation and prayers.

(b) During which of these periods were people more successful in preventing the spread of disease and infection? Explain your answer.

- Ancient Egypt and Ancient Greece 8
- The Middle Ages (c500-1450)

Explain your answer. Try to refer to **both** periods in your answer.

Target: Evaluation and understanding of the key features of the period (AO1/2).

Candidates either submit no evidence or fail to address the question. 0

Level 1: Describes the features of either Ancient Egypt/Ancient Greece or Middle Ages.

Eg describes in some detail how they tackled disease and infection in one of the periods. 1-2

The answer demonstrates simple understanding of the rules of spelling, punctuation and grammar. It is generally coherent but basic in development.

Level 2: Answers that comment briefly on both periods.

Eg they believed in the power of evil spirits in both periods. Ancient Greeks and Egyptians believed in the power of evil spirits and their gods. In the Middle Ages they were convinced that disease was a punishment from God. They both followed the ideas of Hippocrates.

Or answers that consider one period in depth.

This will be more detailed.

Eg Greeks and Egyptians both believed that illness was caused by evil spirits, many of which entered the body. They both therefore saw the cures for illnesses as depending on the use of magic. However, they both developed practical cures for disease and practical treatments for things like broken arms. The big difference was that the Egyptians lived in a much better society which had developed the ability to write. This meant that they could write down the cures and when they worked, this was also recorded so other doctors could continue to use the methods that worked.

3-5

The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is reasonably well organised and presented in a clear and effective manner.

Level 3: Answers that explain and evaluate both periods contribution to the development of tackling disease and infection in a comparison that is detailed but clearly identifies differences in approach as well as similarities.

Eg Greeks and Egyptians both believed that illness was caused by evil spirits, many of which entered the body. They both therefore saw the cures for illnesses as depending on the use of magic. However, they both developed practical cures for disease and practical treatments for things like broken arms. However, in the Middle Ages they could also be trained doctors who had both the benefits of the ideas from Hippocrates and sometimes the writings of some Arab physicians. However, there were still very few trained doctors around.

6-8

The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is well organised with an appropriate form and style of writing. Some specialist vocabulary is used.

Question 5

(a) Choose **one** of the individuals below who has influenced the treatment of disease and infection.

- Louis Pasteur 4
- Robert Koch

Describe the work of your chosen individual.

Target: Understanding of the key features of the role of the individual (AO1).

Candidates either submit no evidence or fail to address the question. 0

Level 1: Answers that show recognition and simple understanding of the key Individual mentioned chosen from the question.

Answers will show simple recognition of chosen **individual**. 1-2

Eg Koch discovered a way to prove which germ caused which disease.
 Pasteur showed that germs caused things like milk to go off.

Level 2: Answers that explain and show understanding in a broader context of the influence of the key individual.

Answers will show:

- Knowledge of some distinctive features of the chosen individual.
- A clear understanding of the impact of work of chosen individual.

3-4

Eg Pasteur used his microscope to identify micro-organisms which made alcohol go sour. He came up with the idea of pasteurisation which killed off the germs. He later went on to prove that spontaneous generation theory did not work even though most scientists' at the time believed that it did. He was also able to show that disease could be spread through the air and that germs cause disease in animals and humans.

(b) Which of these individuals contributed more to the treatment of disease and infection?

- Louis Pasteur
 - Robert Koch
- 8**

Explain your answer. Try to refer to **both** individuals in your answer.

Target: Evaluation and understanding of key factors (AO1/2).

Candidates either submit no evidence or fail to address the question. **0**

Level 1: Describes the impact of individual.

Eg Koch found a way to prove which germ caused which disease.
The answer demonstrates simple understanding of the rules of spelling, punctuation and grammar. It is generally coherent but basic in development. **1-2**

Level 2: Answers that comment briefly on both individuals in a simple comparison.

Eg both saved lives. Pasteur and Koch worked on germs, bacteria and vaccinations.

Or answers that consider one individual in depth.

Eg Pasteur was able to show that bacteria existed in the air and could cause disease. He was also able to prove that by using a weakened strain of bacteria it acted like the vaccinations, which protected people from smallpox by giving them a weakened form. This worked with chickens and Pasteur was therefore able to produce an anti anthrax vaccine. **3-5**

The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is reasonably well organised and presented in a clear and effective manner.

Level 3: Answers that explain and evaluate both individuals' contribution to the development of medicine in a comparison that is detailed.

Both factors were important (explained) and/or a judgement made as to relative importance (for 7-8 marks).

Makes the links between the individual work of Pasteur and Koch. May explain their rivalry but also that each built on the discoveries of the other.

Eg they both saved lives as Pasteur proved that germs caused illnesses and death while Koch was able to identify which bacteria caused which disease. Pasteur was then able to develop other vaccines. **6-8**

May refer to the impact of warfare (rivalry) and importance of communication (to spread scientific ideas).

The answer demonstrates developed understanding of the rules of spelling, punctuation and grammar. It is well organised with an appropriate form and style of writing. Some specialist vocabulary is used.