

Medicine in Britain c1250–present: Answers

1 Medieval England: Ideas about the cause of disease and illness

1 Explain **one** way in which medieval ideas about the causes of disease and illness were different from modern ideas about the causes of disease and illness.

(4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a difference between medieval ideas about the causes of disease and illness and modern ideas about the causes of disease and illness. General information about medieval and/or modern ideas about the causes of disease and illness is included, showing limited knowledge and understanding of the periods.
2	3–4	The answer analyses features of medieval ideas about the causes of disease and illness and features of modern ideas about the causes of disease and illness to explain a difference. Specific information about medieval and modern ideas about the causes of disease and illness is included to support the comparison, showing good knowledge and understanding of both time periods.

An example of a Level 1 answer

One difference between medieval ideas about what caused illness and modern ideas, is that today we have better scientific knowledge. In the past, people didn't know what caused illness, but today we do.

An example of a Level 2 answer

During the medieval period, people mainly believed in superstitious ideas about what caused illness. For example, people believed that the Black Death was a punishment from God. They thought that people who had sinned had upset God, and therefore he sent the plague to punish them.

Modern ideas about the causes of disease and illness are more rational. They are based on scientific understanding and the use of technology, such as microscopes. For example, we understand that there is a connection between lung cancer and smoking, and that COVID-19 is caused by a virus.

2 Explain why the Church played an important role in influencing what people believed caused illness in medieval society. (12)

You **may** use the following in your answer:

- education
- religious causes of illness

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of the Church's role in influencing what people believed caused illness in medieval society.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why the Church's role was important. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of the Church's role in influencing what people believed caused illness in medieval society.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why the Church's role was important. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of the Church's role in influencing what people believed caused illness in medieval society.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why the Church's role was important. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the Church's role in influencing what people believed caused illness in medieval society.

An example of a Level 1 answer

The Church was important in medicine because it controlled education. Therefore, no one could learn about anything that the Church did not approve of.

People also believed what the Church told them about the causes of illness. So, they never looked at any other ideas.

Finally, the Church was important because it encouraged people to believe the works of Galen.

An example of a Level 2 answer

The Church was linked to education during the medieval period. Few people, other than monks, could read and write. Therefore, the Church could control what books were produced and read.

People also believed that God sent illness to people as punishment when they sinned. This means that people only believed in religious ideas about what caused illness.

Finally, the Church liked Galen's ideas because he said that there was a 'creator'. The Christian Church said that this was God.

An example of a Level 3 answer

The Church was very powerful during the medieval period. One of the reasons why it had a huge influence over what people believed caused illness was that it was able to control education. Although the printing press was invented towards the end of the medieval period, for much of this time the only way to produce books was for them to be handwritten. Very few people had the time or education to sit and write out a book. The people who did create books tended to be monks. Therefore, the Church could control what books were created and what went in them. If the Church did not approve of new medical ideas, then they would not be included in books.

Another reason the Church played an important role in influencing people's beliefs was because it was so important in society generally. Everyone's lives revolved around the Church and the teachings of the Bible. Society therefore accepted the idea that God caused illness as a punishment for when people sinned.

The Church encouraged people to follow the teachings of Galen, a Greek/Roman doctor. Galen believed that the four humours (blood, black bile, yellow bile, and phlegm) could be rebalanced, for example by using laxatives like fried linseeds to get rid of excess black bile. Galen's ideas were not always correct. However, because the Church approved of them, no one doubted his theories.

An example of a Level 4 answer

The Church was very powerful during the medieval period. One of the reasons why the Church had a huge influence over what people believed caused illness was that the Church controlled education. The printing press was invented towards the end of the medieval period. However, for much of the medieval period, books were handwritten, mostly by monks. Therefore, the Church could control what books were produced and what went in them. If the Church did not approve of new medical ideas, they would not be included in books. The Church also controlled universities, so only ideas approved by the Church were taught.

Linked to this is the idea that the Church influenced what people believed about the cause of illness because it encouraged people to follow Galen's teachings. The Church approved of Galen because he referred to the 'creator'; the Church interpreted the 'creator' as God. The Church therefore encouraged people to read Galen's works and to follow his Theory of Opposites – his belief that the four humours could be rebalanced. Hippocrates' Theory of the Four Humours and Galen's Theory of Opposites remained popular throughout the medieval period due to the support they received from the Church. If anyone tried to question Galen, they could be accused of heresy or excommunicated, meaning that they would not go to heaven when they died. In this very religious time, people mostly followed the Church's teachings, so people accepted Galen unquestioningly (even though many of his ideas were wrong).

Also, the Church influenced people's superstitious ideas about what caused illness. The Church taught that God had absolute power over everything that happened. People believed that if they committed a sin, then God would punish them. This led many people to believe that if you were ill, it was because God was angry that you had committed sins and was punishing you. This is linked to the Church controlling education, because the Church could ensure that no other explanation was widely circulated, so people accepted this superstitious belief about what caused illness.

3 'People only believed in religious or superstitious causes of disease and illness during the medieval era.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- astrology
- Theory of the Four Humours

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of medieval beliefs about the causes of disease and illness.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the significance of religious or superstitious causes of disease and illness during the medieval era. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of medieval beliefs about the causes of disease and illness.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the significance of religious or superstitious causes of disease and illness during the medieval era. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of medieval beliefs about the causes of disease and illness.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the significance of religious or superstitious causes of disease and illness during the medieval era. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of medieval beliefs about the causes of disease and illness.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

An example of a Level 1 answer

Medieval beliefs about the causes of disease and illness were not only superstitious; people had rational ideas too. People believed that the Theory of the Four Humours was the main cause of illness. However, there were some superstitious ideas too, like the belief that the position of the planets (astrology) could make it more likely that you would get ill. People also believed that God might cause illness as a punishment for committing sins. So, there were a few superstitious beliefs, but some rational ideas too.

An example of a Level 2 answer

Medieval ideas about what caused disease and illness were mainly superstitious. For example, people believed in astrology – how the planets aligned. They believed that certain positions of the planets might make someone ill.

However, there were rational ideas too. Probably the most common explanation for illness was the Theory of the Four Humours. This was based on an Ancient Greek idea and was recorded in the works of Galen. The theory was that the body was made up of four different ‘humours’ (liquids). If there was an imbalance in one of these, then you would become ill. Therefore, people also believed in rational explanations to explain illness, not just superstitious ideas.

Overall, I would argue that people did not only believe in superstitious causes of illness, because they had rational ideas as well.

An example of a Level 3 answer

It is true that superstitious ideas about the causes of illness were significant during the medieval period. Physicians, when completing their training, studied astrology – the study of the planets and their movement through space. There are 12 zodiacs. Medieval people believed that when planets reached different positions in the zodiacs, it could make them ill. This was not based on rational thinking, but on superstition, which shows that many people relied on such ideas to explain what caused illness and disease.

Similarly, people also used religious beliefs to explain illness. It was a very religious time and people thought that God controlled everything, including illness.

However, there were rational ideas too. Probably the most common explanation for illness was Hippocrates’ Theory of the Four Humours. This theory was recorded in the works of Galen. The theory was that the body was made up of four different ‘humours’ (liquids); if there was an imbalance in one of these, then you would become ill. For example, if you had too much phlegm, you would get a cold; if you had too much yellow bile, you might get a tummy bug. This idea was based on rational thinking and trying to use science to explain illnesses. The writings of Galen also encouraged clinical observation, when doctors would observe a patient and record what they saw, so that the ideas could be used if they saw similar symptoms again. Therefore, with scientific observation and rational explanations being used to explain illness, it could not be said that people only believed in superstitious ideas.

Overall, I would disagree that people only believed in superstitious and religious causes of illness, because they also believed in rational ones such as the Theory of the Four Humours.

An example of a Level 4 answer

It is true that superstitious ideas about the causes of illness were significant during the medieval period. Physicians, when completing their training, would study astrology – the study of the planets and how they move through space. There are 12 zodiacs. Medieval people believed that when planets reached different positions in the zodiacs, it could make them ill. This was not based on rational thinking, but on superstition. This shows that many people relied on such ideas to explain what caused illness and disease.

Similarly, people also used religious beliefs to explain illness. Medieval people were generally very religious and believed that God controlled everything, including illness. For example, they believed that the Black Death was caused not by bacteria, as we now know, but was God punishing people because they had committed sins. Few people dared to contradict the Church, which was very powerful. So, this superstitious belief went unchallenged for hundreds of years.

There were rational ideas, too. Probably the most common explanation for illness was the Theory of the Four Humours. This theory was based on an Ancient Greek idea (proposed by Hippocrates), which had been recorded in the works of Galen. Hippocrates' theory was that the body was made up of four different 'humours' (liquids), and if there was an imbalance in one of these then you would become ill. For example, if you had too much phlegm, you would get a cold; if you had too much yellow bile, you might get a tummy bug. This idea was based on rational thinking and trying to use science to explain illness. Galen proposed his Theory of Opposites to counter the four humours. For example, people should drink only hot liquids to counteract phlegm (a cold, wet humour). The writings of Galen also encouraged clinical observation, when doctors would observe a patient and record what they saw, so that the ideas could be used if they saw similar symptoms again. Therefore, the use of scientific observation and rational explanations for illnesses meant that people did not only believe in superstitious ideas.

Overall, I would argue that superstitious and religious ideas about the causes of illness were the most significant, because even the rational ideas that existed had to be endorsed by the Church. The reason Galen's works were widely accepted was that the Church approved of them, so they could be taught at universities and recorded in books handwritten by monks. Galen had referred to the 'creator' in his works, and that fitted with the Christian idea of God. If the Church did not approve of Galen, then his works would have been ignored. Therefore, there is a clear link between the rational ideas that people had and religious/superstitious ones. The Church controlled what people believed caused illness and disease during the medieval period.

2 Medieval England: Approaches to prevention and treatment

- 1 Explain **one** way in which medieval hospitals were different from modern hospitals. (4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a difference between medieval hospitals and modern ones. General information about medieval and/or modern hospitals is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of medieval hospitals and features of modern hospitals to explain a difference. Specific information about medieval and modern hospitals is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- In medieval times, people usually went to hospitals run by monks and nuns, where they would receive care but not cure.
- Modern hospitals are not run by the Church but by the NHS or private medical companies that employ doctors, surgeons, nurses, and other healthcare professionals. In modern hospitals, scientific knowledge, medicines, and technology are used to treat the sick, to cure them, or to allow them to be cared for.

2 Explain why Galen was important in medieval medicine.

(12)

You **may** use the following in your answer:

- Theory of Opposites
- the Church

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why Galen was important in medieval medicine.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why Galen was important in medieval medicine. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of Galen’s importance in medieval medicine.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why Galen was important in medieval medicine. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of Galen’s importance in medieval medicine.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why Galen was important in medieval medicine. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why Galen was important in medieval medicine.

Relevant points that could be included

- Galen’s Theory of Opposites was one of the main treatments used when people were ill. For example, if someone suffering from the Black Death had a fever, they would eat cool foods such as cucumber.

- Galen was important because his ideas were approved by the Church. He believed in ‘the creator’, which fitted the Christian idea of God. This meant that his ideas were reproduced in books and taught in universities. People would not question Galen’s ideas for fear of upsetting the Church or God, because they believed that meant they would go to hell when they died.
- Galen did not experiment on or dissect human bodies (because people during the medieval period believed that the human body was made by God), so his ideas about anatomy were often incorrect. This meant that ideas about medicine stagnated in the medieval period.

3 ‘The people who treated illness during the medieval period were poorly trained.’

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- wise women
- apothecaries

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of how the people who treated illness during the medieval period were trained.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the significance of how the people who treated illness during the medieval period were trained. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of how the people who treated illness during the medieval period were trained.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the significance of how the people who treated illness during the medieval period were trained. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of how the people who treated illness during the medieval period were trained.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the significance of how the people who treated illness during the medieval period were trained. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of how the people who treated illness during the medieval period were trained.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- Wise women were poorly trained because they had no formal education. They simply passed down home remedies from one generation to the next.

- Apothecaries received better training than wise women (though not always). They often studied for seven years and had some understanding of 'simples' and 'compounds' – medicines used to try to cure illness. However, even after seven years of training, apothecaries had no formal qualifications.
- The only professional healthcare provider at that time was a physician (doctor). Physicians trained at university for at least seven years, and gained a qualification. However, seeing a physician was expensive, so most people had to rely on untrained or poorly trained people.
- Even with training, physicians' knowledge was based on teachings approved by the Church, not scientific understanding, and that hindered medical understanding. For example, dissection was rarely allowed, so trainee physicians had little understanding of anatomy.

3 Medieval case study: The Black Death

1 Explain **one** way in which medieval hospitals were similar to hospitals today. (4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a similarity between medieval hospitals and modern hospitals. General information about medieval and/or modern hospitals is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of medieval hospitals and features of modern hospitals to explain a similarity. Specific information about medieval and modern hospitals is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- During the medieval period, there were specialist hospitals for conditions such as leprosy or people with mental-health difficulties.
- Similarly, modern hospitals are split into wards or departments that focus on one area of medicine. For example, they specialise in things like cancer, cardiology, or mental health.

2 Explain why so many people were killed by the Black Death.

(12)

You **may** use the following in your answer:

- superstitious beliefs
- Theory of Opposites

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why so many people were killed by the Black Death.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why so many people were killed by the Black Death. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of why so many people were killed by the Black Death.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why so many people were killed by the Black Death. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of why so many people were killed by the Black Death.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why so many people were killed by the Black Death. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why so many people were killed by the Black Death.

Relevant points that could be included

- Superstitious beliefs about the Black Death could include astrology. These ideas led to methods of prevention and treatments that did not work, such as wearing charms or taking a potion such as arsenic, which we now know is poisonous.

- Following the Theory of Opposites meant that people tried things like bloodletting to treat the fevers that victims of the Black Death suffered from. This treatment would not tackle the bacteria that caused the disease, so many victims still died.
- Other reasons so many people died could include religious beliefs – people would meet in church to pray and worship God in the hope that he would forgive them for their sins and not punish them with the Black Death. However, gathering in churches placed people close together. If an infected person coughed, the bacteria would be spread, increasing the chances of more people dying of the disease.

3 'The methods people used to try to prevent and cure the Black Death never worked.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- miasma
- Theory of the Four Humours

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of the methods people used to try to prevent and cure the Black Death.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the consequences of the methods people used to try to prevent and cure the Black Death. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of the methods people used to try to prevent and cure the Black Death.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the consequences of the methods people used to try to prevent and cure the Black Death. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of the methods people used to try to prevent and cure the Black Death.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the consequences of methods people used to try to prevent and cure the Black Death. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the methods people used to try to prevent and cure the Black Death.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- The idea that the Black Death was caused by miasma (bad smells) did lead to some measures that would have helped to prevent the spread of the disease, such as towns cleaning the streets. However, other ways to tackle miasma, such as letting birds fly around the house or sitting in

sewers to overwhelm the 'bad air', would not have worked, and they may have even made things worse.

- The Theory of the Four Humours encouraged moderation and healthy living, which could have helped people's immune systems so that they could fight off the Black Death. However, attempts to rebalance the humours, such as bloodletting, would not have been successful treatments.
- Religious ideas such as going on a pilgrimage may have helped the disease spread across the country. Flagellants whipping themselves so God would not have to punish them with the disease would not have stopped the disease from spreading, because the Black Death was caused by bacteria.
- Few methods used to prevent or treat those suffering from the Black Death worked. This was because people did not know what caused the disease and therefore could not find effective cures. Anything that did work was coincidental. Even methodical thinking, such as cleaning up the streets, had little impact because the government was not organised enough to ensure that these measures were carried out.

4 Renaissance England: Ideas about the cause of disease and illness

1 Explain **one** way in which Renaissance ideas about the causes of illness were similar to medieval ideas about the causes of illness.

(4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a similarity between medieval and Renaissance ideas about the causes of illness. General information about medieval and/or Renaissance ideas about the causes of illness is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of medieval and Renaissance ideas about the causes of illness to explain a difference. Specific information about medieval and Renaissance ideas about the causes of illness is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- Many people during both the Renaissance and the medieval period believed in the Theory of the Four Humours. They thought that if one of these humours/fluids was unbalanced, you would become ill.
- In both periods, religion was also very important. Most people believed that God sent illness to punish those who had sinned.

2 Explain why the invention of the printing press was important to the development of medicine in the Renaissance period.

(12)

You **may** use the following in your answer:

- the power of the Church
- access to information

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of why the invention of the printing press was important to the development of medicine in the Renaissance period.</p>
2	4–6	<p>The answer contains an explanation, but it is limited and does not link to the reasons why the invention of the printing press was important to the development of medicine in the Renaissance period. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of why the invention of the printing press was important to the development of medicine in the Renaissance period.</p>
3	7–9	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why the invention of the printing press was important to the development of medicine in the Renaissance period. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of why the invention of the printing press was important to the development of medicine in the Renaissance period.</p>
4	10–12	<p>The answer contains an analytical explanation, which is linked to the reasons why the invention of the printing press was important to the development of medicine in the Renaissance period. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why the invention of the printing press was important to the development of medicine in the Renaissance period.</p>

Relevant points that could be included

- Prior to the invention of the printing press, the Church controlled what people could learn about, because books were handwritten by monks. This meant the Church could choose what information was reproduced. The printing press allowed other people to publish books, so ideas that challenged the Church became more widespread. In medicine, Galen's ideas could be challenged.

- The printing press allowed books to be published in different languages (other than Latin, which was the approved language of the Church). This meant that more people had access to information and could read new ideas, such as Harvey's discoveries about the heart and circulation. Books could also be published much quicker, so more information and ideas could be circulated.
- The printing press enabled complicated medical ideas to be printed and demonstrated. For example, Vesalius's complex drawings in *On the fabric of the human body* could be reproduced time and again using a printing press, rather than people having to copy the book by hand. This meant that new medical ideas could be shared and peer reviewed more easily.

3 'There was little change in the understanding of what caused illness between c1250 and c1700.'
How far do you agree? Explain your answer. (16)

You **may** use the following in your answer:

- Theory of the Four Humours
- Andreas Vesalius

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of what caused illness between c1250 and c1700.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to changes in the understanding of what caused illness between c1250 and c1700. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of how ideas about what caused illness changed between c1250 and c1700.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to changes in the understanding of what caused illness between c1250 and c1700. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of how ideas about what caused illness changed between c1250 and c1700.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to changes in the understanding of what caused illness between c1250 and c1700. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of how ideas about what caused illness changed between c1250 and c1700.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- Evidence that there was little change between c1250 and c1700 includes the Theory of the Four Humours. During the medieval period, the Church encouraged treatments to ‘balance’ the four humours (bodily liquids). For example, at the time of the Black Death, people believed that

bloodletting would relieve the fevers brought on by too much blood. Similarly, during the Great Plague of 1665, people still believed that the four humours had become unbalanced.

- Using human dissection, Vesalius had successfully proved that Galen's ideas about human anatomy were sometimes wrong. If Galen was wrong about anatomy, then he could also be wrong about what caused illness (the four humours). This realisation encouraged people to look for other explanations. However, many believed that Galen could not be wrong, and suggested that the human body had changed over time.
- There were developments in people's understanding of microorganisms, such as Leeuwenhoek's observation of 'animalcules' (bacteria). However, this led to little change in people's understanding of what caused illness, because Leeuwenhoek concluded that 'animalcules' were harmless, rather than that these bacteria were causing illness.
- There were significant developments in medical theory during the Renaissance. However, even the work of Vesalius and Harvey (on how the heart and circulation worked) had little practical impact on what caused illness at this time. People were often sceptical about new ideas. Even those who did like the new ideas could not work out how Vesalius's better understanding of anatomy or Harvey's understanding of circulation could be linked to what caused illness. Overall, therefore, there was little practical change.

5 Renaissance England: Approaches to prevention and treatment

1 Explain **one** way in which the people who treated the sick during the Renaissance period were different from the people who treated the sick during the medieval period. (4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a difference between the people who treated the sick during the medieval period and the Renaissance. General information about the people who treated the sick during the medieval period and the Renaissance is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of who treated the sick during the medieval period and those who did so in the Renaissance to explain a difference. Specific information about people who treated the sick during the medieval period and the Renaissance is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- During the medieval period, the sick were often cared for in monasteries by monks and nuns. However, after Henry VIII's dissolution of the monasteries, hospitals run by monks and nuns were shut down. Instead, the sick were cared for in pest houses.
- During the medieval period, there was little regulation of those who cared for the sick, with apothecaries and wise women often having little or no formal training. However, during the Renaissance, training of doctors was more formal, with the development of institutions such as the (Royal) College of Physicians (founded in 1518).

2 Explain why institutions led to progress in the development of medicine between c1500 and c1700.

(12)

You **may** use the following in your answer:

- Royal Society
- charities that ran hospitals

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why institutions led to progress in the development of medicine between c1500 and c1700.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why institutions led to progress in the development of medicine between c1500 and c1700. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of why institutions led to progress in medicine.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why institutions led to progress in the development of medicine between c1500 and c1700. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of why institutions led to progress in the development of medicine between c1500 and c1700.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why institutions led to progress in the development of medicine between c1500 and c1700. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why institutions led to progress in the development of medicine between c1500 and c1700.

Relevant points that could be included

- The Royal Society, founded in 1660, encouraged scientific study. The society published ideas so that they could be shared, challenged, and improved. In 1665, the Royal Society published Robert Hooke's *Micrographia*. Then, in 1673, it published van Leeuwenhoek's studies of bacteria ('animalcules'). Both texts progressed people's understanding of what caused illnesses (bacteria).
- Hospitals and pest houses were paid for by the monarchy, charities, or wealthy benefactors. These institutions helped to improve medical care.
- The (Royal) College of Physicians (founded 1518) formalised and regulated the work of health-care providers. For example, surgeons who were trained were given licences and could be punished if they were found to be negligent.
- During the Great Plague of 1665, local councils paid for street cleaners, leading to better public health. Local governments ordered dogs and cats to be killed, closed mass gatherings, and used parish searchers to enforce quarantine laws. National and local governments showed an understanding that things could be done to stop the spread of diseases (plague).

3 'Galen was still the most influential individual in English medicine during the Renaissance.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- Theory of the Four Humours
- Thomas Sydenham

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of the significance of individuals such as Galen and Sydenham.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the significance of individuals such as Galen or Sydenham. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of the significance of individuals such as Galen and Sydenham.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the significance of individuals such as Galen or Sydenham. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of the significance of individuals such as Galen and Sydenham.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the significance of individuals such as Galen and Sydenham. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the significance of individuals such as Galen and Sydenham.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- Galen was still hugely significant during the Renaissance, because most people still believed that illness was caused when one of the four humours (bodily liquids) was out of balance. Galen had written about Hippocrates' Theory of the Four Humours, as well as suggesting his own Theory of Opposites, which suggested using counterbalancing methods to cure illnesses.

- Thomas Sydenham (called the ‘English Hippocrates’) was significant because he wrote *Observationes Medicae (Medical Observations)* in 1676, in which he suggested the use of opium as a painkiller and quinine-based treatments for malaria. His book became the most used medical textbook for the next 200 years, and some of his ideas are still in use today.
- The impact of individuals such as Vesalius and Harvey, both of whom challenged Galen’s work, was significant. They made it more likely that others would question Galen and develop new ideas about medicine. For example, the Swiss physician Paracelsus used chemicals and metals to treat illnesses; Lady Grace Mildmay, a midwife, used natural remedies and chemical cures (arsenic).

6 Renaissance case studies: William Harvey and the Great Plague

1 Explain **one** way in which beliefs in the causes of the Great Plague (1665) were similar to beliefs in the causes of the Black Death (from 1348). (4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a similarity between medieval ideas about what caused the Black Death and Renaissance ideas about what caused the Great Plague. General information about medieval/Renaissance beliefs about what caused plague is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses medieval and Renaissance ideas about what caused plague to explain a similarity. Specific information about medieval and Renaissance ideas about what caused plague is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- Many people relied on superstitious or religious explanations of what caused plague in both the medieval and Renaissance periods. For example, many believed that God or the position of the planets (astrology) caused both the Black Death and the Great Plague.
- People in both the medieval and Renaissance periods thought that miasma (bad smells) caused the Black Death and the Great Plague.

2 Explain why William Harvey's ideas had limited impact during the Renaissance.

(12)

You **may** use the following in your answer:

- attitudes in society
- Harvey's own concerns about his work

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why Harvey's ideas had limited impact during the Renaissance.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why Harvey's ideas had limited impact during the Renaissance. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of why Harvey's ideas had limited impact.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why Harvey's ideas had limited impact during the Renaissance. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of why Harvey's ideas had limited impact during the Renaissance.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why Harvey's ideas had limited impact during the Renaissance. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why Harvey's ideas had limited impact during the Renaissance.

Relevant points that could be included

- Early beliefs about blood circulation were based on Galen's ideas. Harvey's theory on the motion of the heart and blood in animals (circulation) proved that Galen's ideas (and also ideas about the four humours) were wrong. However, society wasn't ready to discount Galen's work and accept

Harvey's. People were shocked by Harvey's theory; they felt that his work was dangerous and dismissed him as a 'quack' (unqualified doctor).

- Harvey himself was reluctant to publish his works. He could not explain why blood needed to circulate or how blood moved from arteries to veins. When he tried to carry out blood transfusions, they did not work (because Harvey did not understand about different blood groups). This failure made it easy for people to discredit his ideas. After criticism of his work, Harvey retired.
- Harvey promoted research and experimentation, encouraging others to see things in more scientific and rational ways. Harvey's ideas were eventually accepted, but only much later, when they fitted with emerging ways of thinking about anatomy and ways of practising medicine.

3 'Measures taken to prevent and cure the Great Plague demonstrate that there had been considerable progress in medicine since the Black Death.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- the work of local governments
- miasma

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of the progressive measures taken to prevent and cure the Great Plague.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the changes in measures used to prevent and cure illness since the time of the Black Death. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of the progressive measures taken to prevent and cure the Great Plague.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the changes in measures used to prevent and cure illness since the time of the Black Death. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of the progressive measures taken to prevent and cure the Great Plague.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the changes in measures used to prevent and cure illness since the time of the Black Death. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the progressive measures taken to prevent and cure the Great Plague.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- One preventative measure used at the time of the Black Death was cleaning streets. However, this had little impact at the time because the government was not organised enough to ensure that these measures were carried out effectively. By the time of the Great Plague, national and local governments were stronger and more coordinated. Local governments took measures to prevent the spread of the Great Plague by employing people to clean the streets, and parish

searchers to find and quarantine people with symptoms. Local governments also closed theatres and other places where lots of people could meet. These measures meant that bacteria were less likely to spread. Although local governments at the time would not have realised this, these steps show progression.

- During the Black Death, people believed that miasma (bad smells) caused plague. Miasma was also believed to be a cause of the Great Plague. To prevent miasma during both periods, people wore posies around their necks and used pomanders filled with nice-smelling spices from the New World to ward off the smells. This shows a stagnation of ideas, rather than progress, because thinking had not changed since medieval times.
- Other evidence that measures to prevent and cure illness during the Great Plague had not progressed since the Black Death include religious ideas to prevent getting plague, such as praying and repenting of your sins, and rational ideas, such as sweating out a fever. These ideas were not based on science and therefore had little positive impact on the patient.

7 Eighteenth- and nineteenth-century Britain: Ideas about the cause of disease and illness

1 Explain **one** way in which beliefs about what caused illness were different in the medieval period and during the industrial revolution. (4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a difference between the causes of illness during the medieval period and the causes of illness during the industrial revolution. General information about medieval and/or eighteenth- and nineteenth-century ideas about the causes of illness is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of medieval ideas about the causes of illness and features of eighteenth- and nineteenth-century ideas about the causes of illness to explain a difference. Specific information about medieval and eighteenth- and nineteenth-century ideas about the causes of illness is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- During the medieval period, people had superstitious or religious ideas about what caused illness. For example, they believed that God caused illnesses such as the Black Death as a form of punishment for sin.
- During the industrial revolution, people were more inclined to look for scientific explanations for illness. For example, John Snow used maps to find the source of an outbreak of cholera, and Pasteur developed his Germ Theory.

2 Explain why it took so long for Germ Theory to be widely accepted in Britain.

(12)

You **may** use the following in your answer:

- spontaneous generation
- Dr Henry Bastian

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why it took so long for Germ Theory to be widely accepted in Britain.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why it took so long for Germ Theory to be widely accepted in Britain. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of why it took so long for Germ Theory to be widely accepted in Britain.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why it took so long for Germ Theory to be widely accepted in Britain. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of why it took so long for Germ Theory to be widely accepted in Britain.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why it took so long for Germ Theory to be widely accepted in Britain. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why it took so long for Germ Theory to be widely accepted in Britain.

Relevant points that could be included

- The idea of spontaneous generation – that microbes (germs) appear when something is rotting – was first promoted in the 1850s. An experiment carried out by Louis Pasteur in 1860 disproved the idea of spontaneous generation. Pasteur showed that germs were killed using heat (a process later known as pasteurisation); when pasteurisation happened, food did not go off (decay). As well as disproving spontaneous generation, Pasteur had proved Germ Theory – that germs in the air cause decay. However, he could not prove that germs cause disease in humans.
- Henry Bastian was a well-respected doctor who firmly believed in spontaneous generation. He argued that because there were so many germs in the human body, if they caused disease, it would be impossible for anyone to ever be healthy. Since Pasteur was not a doctor, and could not test his theories on humans, many people chose to believe Bastian over Pasteur, and did not accept Germ Theory.
- By 1900, Germ Theory was largely accepted due to several events: Joseph Lister had applied Germ Theory to antiseptic surgery and reduced the likelihood of infection; Joseph Bazalgette’s work on sewers convinced people that germs, not miasma, caused illness; Robert Koch’s use of dyes and photography showed that different germs caused different illnesses.

3 ‘The most important factor in the development of Germ Theory was the work of individuals.’

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- French Academy of Sciences
- Robert Koch

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of the factors that led to the development of Germ Theory.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the causes of the development of Germ Theory. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of the factors that led to the development of Germ Theory.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the causes of the development of Germ Theory. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of the factors that led to the development of Germ Theory.</p> <p>An overall judgement is given and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the causes of the development of Germ Theory. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the factors that led to the development of Germ Theory.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- Initially, an institution was a key factor in the development of Germ Theory, rather than any individuals. In 1860, the French Academy of Sciences launched a competition challenging people to prove or disprove the idea of spontaneous generation. Louis Pasteur entered this competition. He experimented on milk and beer to prove that when germs were present, these liquids went off. However, if the germs were killed by heating (pasteurisation), the substance would not go off.

- Robert Koch applied Pasteur's ideas to medicine and illness. He used dyes to identify the germs that caused anthrax, tuberculosis, and cholera. Since Pasteur was a scientist not a doctor, doctors such as Henry Bastian were able to discredit Pasteur. However, Koch was a medical doctor, so people were more willing to accept his ideas.
- Joseph Lister successfully applied Germ Theory in his work on antiseptic surgery. By killing germs, he demonstrated that infection was less likely following surgery. This added weight to the idea of Germ Theory.

8 Eighteenth- and nineteenth-century Britain: Approaches to prevention and treatment

1 Explain **one** way in which treatment of illness in the medieval period was similar to the treatment of illness in the Renaissance period.

(4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a similarity between the treatment of illness during the medieval and Renaissance periods. General information about medieval and/or Renaissance treatments of illness is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of medieval and Renaissance treatments of illness to explain a difference. Specific information about medieval and Renaissance treatments of illness is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- During the medieval period, Galen's Theory of Opposites was used to rebalance the humours (bodily fluids) if any of them were unbalanced. People continued to use Galen's opposites to treat illnesses in the Renaissance. For example, treatments such as bloodletting were commonly used to get rid of an 'excess'.
- In both periods, people still used herbs and magic potions to treat illnesses.
- In both periods, people held superstitious beliefs. For example, it was thought that the king's touch could heal the king's evil (scrofula, a skin disease).

2 Explain why Florence Nightingale played an important role in improving approaches to the prevention and treatment of illness. (12)

You **may** use the following in your answer:

- training nurses
- *Notes on Hospitals* (1863)

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why approaches to the prevention and treatment of illness improved.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why approaches to the prevention and treatment of illness improved with the work of Nightingale. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of why approaches to the prevention and treatment of illness improved.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why approaches to the prevention and treatment of illness improved with the work of Nightingale. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of why approaches to the prevention and treatment of illness improved.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why approaches to the prevention and treatment of illness improved with the work of Nightingale. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why approaches to the prevention and treatment of illness improved.

Relevant points that could be included

- Nightingale set up the Nightingale Training School, to train nurses to be professional and disciplined. She also published *Notes on Nursing* (1859), which was a bestseller and was used as a textbook to train nurses.
- Nightingale also published *Notes on Hospitals* (1863). She used infographics to present her evidence and recommended that hospitals should be built in the pavilion style, with different wards for different illnesses. This allowed staff to specialise in the care of a particular illness and prevented germs from spreading.
- Nightingale's work during the Crimean War could also be considered. She worked with a group of nurses to clean up the hospital, ensuring that the death rate of soldiers dropped significantly. She also used her personal connections to gain publicity, support, and funding for her work.

3 'The main reason there were significant breakthroughs in public health in eighteenth- and nineteenth-century Britain was the work of influential individuals.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- Edwin Chadwick
- Second Public Health Act (1875)

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of why there were significant breakthroughs in public health in eighteenth- and nineteenth-century Britain.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to what caused significant breakthroughs in public health in eighteenth- and nineteenth-century Britain. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of why there were significant breakthroughs in public health in eighteenth- and nineteenth-century Britain.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to what caused significant breakthroughs in public health in eighteenth- and nineteenth-century Britain. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of the causes of significant breakthroughs in public health in eighteenth- and nineteenth-century Britain.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to what caused significant breakthroughs in public health in eighteenth- and nineteenth-century Britain. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why there were significant breakthroughs in public health in eighteenth- and nineteenth-century Britain.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- One individual who helped public health progress was Edwin Chadwick, who published his *Report on the Sanitary Conditions of the Labouring Population of Great Britain* in 1842. In the report, he established a link between poor sanitary/living conditions and illness, and encouraged the government to fund improvements, such as appointing a medical officer for each district.
- Although not the work of individuals, the Second Public Health Act of 1875 was also influential. The Act was introduced by the government to enforce changes that significantly improved public health. The Act stated that slum housing had to be torn down, clean water had to be provided to all houses, and rubbish had to be collected/disposed of. The Act also introduced strict rules about what could be added to food and drink.
- Other influential individuals include John Snow, who proved the link between dirty water and cholera, and Joseph Bazalgette, who solved the Great Stink of 1858 by building sewers throughout London.
- It can be argued that the work of individuals was of little significance without the backing of the government. For example, Chadwick's work was not compulsory, so little changed. However, when the government funded Bazalgette's sewers and passed the Second Public Health Act to win the vote of the expanding electorate, changes had real impact.

9 Eighteenth- and nineteenth-century case studies: Edward Jenner and cholera

1 Explain **one** way in which ideas about the cause of cholera in the 1830s were similar to ideas about the cause of the Black Death in the medieval period. (4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a similarity between medieval ideas about the cause of the Black Death and ideas about the cause of cholera in the 1830s. General information about what people thought caused illness during the medieval period and/or the 1830s is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses ideas about what caused the Black Death during medieval times and cholera in the 1830s to explain a similarity. Specific information about what people thought caused illness during the medieval period and in the 1830s is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- No one in the medieval period or in the 1830s understood that illness was caused by germs, so other rational explanations – such as the belief that miasma or bad smells carried the Black Death – were common.
- People in both periods believed that illness was caused by God. Medieval people believed that the Black Death was God punishing people for their sins. Similarly, there was a national Day of Fasting and Humiliation in 1832 to show God that people were sorry for their sins, so that he would not punish them with cholera.

2 Explain why William Harvey plays an important role in the history of medicine.

(12)

You **may** use the following in your answer:

- blood circulation
- Galen's ideas

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why Harvey was important in the development of medicine.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why Harvey was important in the development of medicine. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of why Harvey was important in the development of medicine.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why Harvey was important in the development of medicine. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of why Harvey was important in the development of medicine.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why Harvey was important in the development of medicine. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why Harvey was important in the development of medicine.

Relevant points that could be included

- Harvey was important because he proved, scientifically, that blood circulated around the body. This discovery was significant, as it meant that in later years, once people understood about different blood groups, they could use blood transfusions to save lives.
- Harvey's ideas challenged the work of Galen. Galen had suggested that blood was made in the liver, then transported around the body in veins to the organs, which consumed the blood. By proving that blood circulated, Harvey disproved Galen, whose theory had been accepted for hundreds of years. If Galen could be wrong about that, he could be wrong about other things, such as the four humours being the cause of illnesses. Therefore, doctors became more willing to look for new explanations about the causes and treatments of illnesses.
- Harvey made his discoveries using research and scientific experiments, such as observing blood circulation in live animals. This encouraged others to be brave enough to experiment and use scientific methods, rather than just accepting what they read in books.

3 'Edward Jenner's importance in the history of medicine has been exaggerated.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- inoculation
- the eradication of smallpox

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of the successes and limitations of Jenner’s work.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the significance of Jenner’s work. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of the successes and limitations of Jenner’s work.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the significance of Jenner’s work. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of the successes and limitations of Jenner’s work.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the significance of Jenner’s work. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the successes and limitations of Jenner’s work.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- Jenner’s importance might be considered exaggerated because his ideas were not particularly new. Inoculation had been used in places like Africa, India, China, and Turkey. An English woman named Lady Wortley-Montagu had successfully used the Turkish method to protect rich people in England.
- At the time, people were sceptical about Jenner’s ideas. Many believed that a simple country doctor should not be trusted. In addition, Jenner could not explain why vaccination worked, so many people would not try to get vaccinated. There was even an anti-vaccination league, demonstrating that – to begin with, at least – Jenner had limited impact, because few people were prepared to try his new technique.

- Jenner was the first person to try to develop a vaccine. His scientific method of proving that vaccination worked gave others the confidence to try.
- It can be argued that Jenner's main importance lies in the long-term impact of his discoveries, as well as the vast scale of people who have benefited from them. Jenner used pus from cowpox to vaccinate people from smallpox. Today, smallpox is one of only two diseases that has been completely eradicated from the world. It is doubtful that this would have happened without Jenner's work.
- Vaccination has been used to fight other diseases, such as COVID-19, and has potentially saved millions of lives. Vaccination is also more successful than inoculation, which can still leave people vulnerable to getting a disease.

10 Modern Britain: Ideas about the cause of disease and illness

1 Explain **one** way in which ideas about the causes of illness in the twentieth century were different from those in the nineteenth century.

(4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a difference between what people in the nineteenth and twentieth centuries believed about causes of illness. General information about nineteenth- and/or twentieth-century beliefs about what caused illness is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of what people in the nineteenth and twentieth centuries believed about the causes of illness to explain a difference. Specific information about nineteenth- and twentieth-century beliefs about what caused illness is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- In the nineteenth century, people still believed in religious causes of illness; some rational ideas, such as miasmas causing illness, were incorrect. Even after Pasteur published his Germ Theory in 1861, many people did not accept his ideas because he was not a doctor and his research was based on food, not the human body. Throughout the nineteenth century, Germ Theory was not accepted or used to explain why illness occurred.
- By the start of the twentieth century, Koch had proved that Germ Theory could be applied to humans, and germs were widely accepted as the cause of illness. Few people believed in religious causes of illness, now that science and technology could be used to explain illnesses, such as the link between lung disease and smoking. People also understood that illness could be hereditary (caused by genetics).

2 Explain why the development of technology has helped medicine progress in the twentieth century.

(12)

You **may** use the following in your answer:

- X-rays
- endoscopes

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of why technology helped medicine progress in the twentieth century.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why technology was important in the progression of medicine in the twentieth century. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of why technology helped medicine progress in the twentieth century.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why technology was important in the progression of medicine in the twentieth century. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of why technology helped medicine progress in the twentieth century.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why technology was important in the progression of medicine in the twentieth century. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of why technology helped medicine progress in the twentieth century.

Relevant points that could be included

- X-rays were discovered in 1895 by Wilhelm Roentgen. In the twentieth century, Rosalind Franklin captured the first image of DNA using an X-ray. Using this X-ray, James Watson and Francis Crick determined the 'double helix' shape of DNA, which allowed scientists to study genes. Understanding of hereditary diseases and genetic disorders such as Down's Syndrome (which was first explained in 1959) has progressed because of this.
- Endoscopes are long tubes with cameras at the end. They can be inserted into the body to see inside and explore key areas, such as the stomach or bowel. Endoscopes have helped medicine progress, because they have enabled keyhole surgery to take place, as well as being used to diagnose illnesses. Keyhole surgery procedures are much safer, there is a reduced risk of infection post-surgery, and patients recover more quickly.
- Other technological developments that have helped medicine progress in the twentieth century include advances in diagnostic technology, such as CT scans, MRI scans, and ultrasound scans, which have made it easier to diagnose illness. They also include improved methods of mass communication, such as television and the internet, which have enabled governments to spread public health messages – for example, campaigns to help people stop smoking or to eat a healthier diet.

3 'The most significant individual in the history of medicine was Louis Pasteur.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- Germ Theory
- Vesalius

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of individuals, such as Pasteur, who have been significant in the development of medicine. An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to the significance of Pasteur or other individuals who have played a part in the history of medicine. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of Pasteur and/or other individuals who have played a part in the history of medicine.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to the significance of Pasteur and other individuals who have played a part in the history of medicine. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of Pasteur and/or other individuals who have played a part in the history of medicine.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to the significance of Pasteur and other individuals who have played a part in the history of medicine. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of Pasteur and/or other individuals who have played a part in the history of medicine.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- Louis Pasteur developed Germ Theory, which was significant because it explained how disease and illness were caused. Without understanding that germs cause illnesses, effective cures could not be developed. Germ Theory also inspired the work of others, such as Joseph Lister and Alexander Fleming: Lister developed antiseptic surgery, saving millions from potentially dying from infection after surgery, and Fleming studied microbes and bacteria, leading him to develop penicillin.

- Vesalius was significant in the history of medicine. Not only did he develop an understanding of human anatomy, but he also encouraged scientific techniques, such as dissection, at a time when the all-powerful Church did not approve of them. Vesalius challenged the beliefs of Galen, whose ideas had been accepted for more than a thousand years. This paved the way for others, such as William Harvey, to question Galen, who had been wrong about many things.
- Other significant individuals in the history of medicine include:
 - Galen: His Theory of Opposites and his use of the Theory of the Four Humours was the basis of medical ideas for nearly two millennia.
 - John Snow: By mapping cases of cholera, Snow helped to establish the link between dirty water and the disease, and encouraged the British government to abandon its laissez-faire approach and invest in public health.
 - Florence Nightingale: She revolutionised nursing, recommending that hospitals have different wards to separate and treat patients with different illnesses, so infection could more easily be controlled.
 - William Beveridge: His report inspired the setting up of the NHS, guaranteeing healthcare that was free at the point of delivery for everyone in the United Kingdom, regardless of income.
- The limitations of Pasteur's work might be considered: he was a scientist, not a doctor, and studied food, not the human body. This meant that many people were reluctant to believe Pasteur's ideas. It is also possible that Germ Theory would have stalled were it not for the work of Robert Koch; this limits Pasteur's significance.

11 Modern Britain: Approaches to prevention and treatment

1 Explain **one** way in which hospitals in the sixteenth and seventeenth centuries were different from hospitals in the twentieth and twenty-first centuries. (4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a difference between hospitals in the sixteenth/seventeenth and twentieth/ twenty-first centuries. General information about hospitals in the sixteenth/seventeenth and/or twentieth/twenty-first centuries is included, showing limited knowledge and understanding of the time periods.
2	3–4	The answer analyses features of hospitals in the sixteenth/seventeenth and twentieth/ twenty-first centuries to explain a difference. Specific information about hospitals in the sixteenth/seventeenth and twentieth/twenty-first centuries is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- In the sixteenth and seventeenth centuries, hospitals run by monks and nuns were shut down and the sick were cared for in pest houses. Some hospitals were kept open and paid for by the monarchy, charities, or wealthy benefactors. In the twentieth and twenty-first centuries, public hospitals are run by the National Health Service, making healthcare free at the point of service.
- In the sixteenth and seventeenth centuries, treatments were still very limited; many treatments were based on religious or superstitious ideas and Galen's Theory of Opposites. In the twentieth and twenty-first centuries, hospitals use modern technology to diagnose and treat illness.

2 Explain why some people opposed the NHS when it was first introduced. (12)

You **may** use the following in your answer:

- cost
- British Medical Association

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of the reasons why some people opposed the NHS when it was first introduced.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why some people opposed the NHS when it was first introduced. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of the reasons why some people opposed the NHS when it was first introduced.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why some people opposed the NHS when it was first introduced. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of the reasons why some people opposed the NHS when it was first introduced.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why some people opposed the NHS when it was first introduced. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the reasons why some people opposed the NHS when it was first introduced.

Relevant points that could be included

- The budget for the NHS was £280 million when it first started. To raise this amount, the government had to tax people, so they saw less money in their pay packets.
- The British Medical Association believed that the NHS was the government's attempt at controlling doctors. Doctors were also concerned that they would lose income, because they had been able to charge what they wanted before the NHS.
- Some people were concerned that by giving people free healthcare they would lose the incentive to work. It was thought that being given something for nothing would lead people to think there was no point in working for things, and that this would have a huge impact on the country because motivated workers were needed in industry. Without hard workers, some people feared that Britain's development would fall behind that of other countries.

3 'Technology has been the most important factor in medical progress.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- keyhole surgery
- Louis Pasteur

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of technology and/or other factors that led to medical progress. An overall judgement is missing or is given but is not justified.
2	5–8	The answer contains an explanation, but it is limited and does not link to the causes of medical progress. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of the factors that led to medical progress. An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.
3	9–12	The answer contains an explanation, which shows some analysis and is mainly linked to the causes of medical progress. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of the factors that led to medical progress. An overall judgement is given, and it is justified, but the justification is not fully explained.
4	13–16	The answer contains an analytical explanation, which is linked to the causes of medical progress. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the factors that led to medical progress. An overall judgement is given and the justification for the judgement is fully explained.

Relevant points that could be included

- Technology has made keyhole surgery possible. Endoscopes (long tubes with cameras at the end) can be inserted through small, keyhole-sized incisions so that surgeons can see inside the body without needing to open it up completely. This reduces the chances of infection from surgery, and improves recovery times.
- Louis Pasteur is an individual who helped medical progress. Pasteur's development of Germ Theory was crucial in the progression of medicine. Prior to understanding that germs caused illness, people could not develop effective cures, and many people died of infection because no one understood the need for antiseptic surgery. Once Pasteur (and Robert Koch) realised that germs caused illness, effective medicines could be developed to cure diseases like anthrax, tuberculosis, and cholera.
- Other important factors in medical progress include the following:
 - War, which made Pasteur and Koch rivals and motivated their discoveries. It also prompted Florence Nightingale to lead the way in ensuring hospitals were clean.
 - The British government, which passed the Second Public Health Act in 1875, making it a legal requirement for clean water to be supplied to houses, so making cholera outbreaks less likely. The government also established the NHS.
- Chronology is another key consideration: in the nineteenth, twentieth, and twenty-first centuries, technology led to huge progress in medicine. However, prior to this, other factors were more significant to medical progress.

12 Modern case studies: Fleming, Florey, and Chain, and lung cancer

1 Explain **one** way in which surgery during the years c1250–c1500 was different from surgery today.

(4)

Mark scheme

Level	Marks	Explanation
1	1–2	The answer contains a simple or generalised comment about a difference between surgery in the medieval period and today. General information about medieval and/or modern ideas about surgery is included, showing limited knowledge and understanding of the periods.
2	3–4	The answer analyses features of medieval surgery and features of surgery today to explain a difference. Specific information about surgery in the medieval period and today is included to support the comparison, showing good knowledge and understanding of both time periods.

Relevant points that could be included

- Training was a factor that differed between the two periods. In the medieval period, surgeons were not trained. They were often barber surgeons and would rarely perform operations to treat issues inside the body. Instead, they carried out procedures such as removing rotten teeth and setting bones. Surgery today is carried out by trained surgeons, regulated by the General Medical Council. Therefore, surgery has been transformed from butchery to a precise science.
- Other differences could include: the use (or not) of real anaesthetic; the need for antiseptic conditions (the risk of infection was much higher in medieval times); technological advances, such as keyhole surgery, which have allowed more complex operations to be performed today.

2 Explain why Florey and Chain played an important role in the development of penicillin. (12)

You **may** use the following in your answer:

- Alexander Fleming
- purifying penicillin

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–3	The answer is simple or generalised. It is not developed, and it is poorly organised. The answer contains limited knowledge and understanding of the role Florey and Chain played in the development of penicillin.
2	4–6	The answer contains an explanation, but it is limited and does not link to the reasons why Florey and Chain were important in the development of penicillin. It contains some development and organisation of material, but a clear line of reasoning throughout is missing. Accurate and relevant information is included, showing some knowledge and understanding of the role Florey and Chain played in the development of penicillin.
3	7–9	The answer contains an explanation, which shows some analysis and is mainly linked to the reasons why Florey and Chain were important in the development of penicillin. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be. Accurate and relevant information is included, showing good knowledge and understanding of the role Florey and Chain played in the development of penicillin.
4	10–12	The answer contains an analytical explanation, which is linked to the reasons why Florey and Chain were important in the development of penicillin. There is a clear line of reasoning throughout, and the answer is coherent and well organised. Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the role Florey and Chain played in the development of penicillin.

Relevant points that could be included

- Fleming had noticed that *Penicillium* killed bacteria, but few people were interested in his work. It was only when Florey and Chain took an interest in Fleming's work that a practical use for this mould was developed – and only because of their determination. The British government gave them just £25 of funding, so it was their passion that fuelled their work.
- Fleming had extracted small amounts of 'mould juice' from the *Penicillium* mould, but this was not ready to be used on humans. Chain developed a method to purify penicillin, using milk bottles, a dog bath, and a pump. Without this important step, penicillin may have remained unusable.
- Florey and Chain managed to keep a policeman with an infected wound alive, using their supplies of purified penicillin. However, when their stocks ran out, he died. Florey realised that penicillin needed to be mass produced. He travelled to the USA to seek financial support. The US government were keen to fund mass production because the USA had just entered the Second World War and needed to keep soldiers alive. The government paid pharmaceutical companies to mass produce the medicine. It was Florey's relentless drive that secured this funding.

3 'The government's role in discouraging people from smoking has had the biggest impact on reducing deaths from lung cancer.'

How far do you agree? Explain your answer.

(16)

You **may** use the following in your answer:

- banning the advertising of smoking
- radiotherapy

You **must** also use information of your own.

Mark scheme

Level	Marks	Explanation
1	1–4	<p>The answer is simple or generalised. It is not developed, and it is poorly organised.</p> <p>The answer contains limited knowledge and understanding of the factors leading to a reduction in the number of deaths caused by lung cancer.</p> <p>An overall judgement is missing or is given but is not justified.</p>
2	5–8	<p>The answer contains an explanation, but it is limited and does not link to what caused a reduction in deaths caused by lung cancer. It contains some development and organisation of material, but a clear line of reasoning throughout is missing.</p> <p>Accurate and relevant information is included, showing some knowledge and understanding of the factors leading to a reduction in the number of deaths caused by lung cancer.</p> <p>An overall judgement is given, and it is justified, but the justification is not explained at all or is poorly explained.</p>
3	9–12	<p>The answer contains an explanation, which shows some analysis and is mainly linked to what caused a reduction in deaths caused by lung cancer. There is generally a clear line of reasoning throughout, but some passages are not as coherent and organised as they could be.</p> <p>Accurate and relevant information is included, showing good knowledge and understanding of the factors leading to a reduction in deaths caused by lung cancer.</p> <p>An overall judgement is given, and it is justified, but the justification is not fully explained.</p>
4	13–16	<p>The answer contains an analytical explanation, which is linked to what caused a reduction in deaths caused by lung cancer. There is a clear line of reasoning throughout, and the answer is coherent and well organised.</p> <p>Accurate and relevant information has been chosen to address the question directly, showing a wide-ranging knowledge and understanding of the factors leading to a reduction in deaths caused by lung cancer.</p> <p>An overall judgement is given and the justification for the judgement is fully explained.</p>

Relevant points that could be included

- In 1965, the British government banned the advertising of tobacco in cinemas. In 2005, tobacco advertising was completely banned. Prior to this, smoking had been depicted in films and television shows, as well as on advertisements, as glamorous and sophisticated. Banning such portrayals made it less likely that people would start smoking, so fewer people developed lung cancer.

- The development of radiotherapy as a treatment also reduced the number of deaths caused by lung cancer. In this treatment, beams of radiation are carefully targeted at cancerous growths to kill them, making patients more likely to recover.
- Another factor that has led to a reduction in deaths caused by lung cancer is additional work by the British government. Examples include: the Stoptober campaign (which encourages people to stop smoking in the month of October); banning smoking in all workplaces; passing a law that said graphic images showing the effects of smoking must be displayed on cigarette packets and other tobacco products.

13 Historic environment: Life in the British sector of the Western Front during the First World War

1a Describe **one** feature of trench warfare on the Western Front.

(2)

Mark scheme

You can award two marks for this question. Award one mark for a valid feature, and one mark for accurate supporting information.

An example of a two-mark answer

Trench warfare on the Western Front saw soldiers living and fighting in trenches. These were built to stop the enemy from advancing, to protect soldiers, and to give them an area to attack from. (1) While waiting to fight, soldiers were based in the frontline trenches, behind which was a system of support and reserve trenches, all joined together by communication trenches. (1)

1b Describe **one** feature of the chain of evacuation during the First World War.

(2)

Mark scheme

You can award two marks for this question. Award one mark for a valid feature, and one mark for accurate supporting information.

An example of a two-mark answer

The chain of evacuation was the process by which soldiers injured in no-man's land or in the frontline trenches were transferred somewhere safer. (1) The chain of evacuation started with stretcher bearers and ended with the base hospital. (1)

2 (a) Study Sources A and B.

How useful are Sources A and B for an enquiry into the link between conditions in the trenches and the illnesses soldiers suffered from?

Explain your answer, using Sources A and B and your knowledge of the historical context. (8)

Mark scheme

Level	Marks	Explanation
1	1–2	Judgements on the usefulness of the sources are simple, and comments on the content of the sources and/or their provenance are limited. The sources have been quoted, paraphrased, or described, but a full understanding of what they mean is not demonstrated. The answer contains little contextual knowledge, and links to the source are limited.
2	3–5	Judgements on the usefulness of the sources for the specific enquiry are given, with valid criteria. Judgements are supported by developed comments about the content of the sources and/or their provenance. Some analysis of the sources is used to support the judgements on the usefulness of the sources. The answer uses contextual knowledge to support comments on the usefulness of the sources.
3	6–8	Judgements on the usefulness of the sources for the specific enquiry are given, with valid and well-chosen criteria. Judgements take into account how the provenance affects the usefulness of the source. The sources are analysed to support the judgements about their usefulness. The answer uses contextual knowledge, as part of the process of interpreting the sources and applying valid and well-chosen criteria for judgements on the sources' usefulness.

An example of a Level 1 answer

The sources are useful because Source B describes a soldier whose feet had swollen because he had been standing in water. Source A shows the trenches and there are big holes in the ground where bombs have gone off.

An example of a Level 2 answer

The sources are as useful as they show that the poor conditions soldiers lived with in the trenches led to disease and illness. For example, Source A shows a trench with soldiers huddled in the mud. Around the trenches, the land is marked with holes where it has sustained heavy shelling, and on the horizon, smoke billows out as artillery is fired. These conditions led to illnesses such as shell shock, when

soldiers' mental health suffered because they were constantly surrounded by the threat of death and injury, as well as the scary noise of shells exploding.

Source B is useful as it also shows that the poor conditions in the trenches led to illnesses. Here, a soldier is described as 'standing in water for several days', which led to his feet being 'very swollen and he lost sensation'. This could be describing trench foot. Much of the land that the trenches were built in was waterlogged, and standing in damp conditions led to trench foot. Many soldiers had to have their feet amputated to stop this gangrene from spreading.

The sources are also useful because they are both primary sources. Source A was written in 1920 and Source B in 1915, so it is likely that they were created by eyewitnesses.

An example of a Level 3 answer

The sources are useful as they show the poor conditions of the trenches where soldiers lived on the frontline, which led to disease and illness. For example, Source A shows a trench with soldiers huddled in the mud. Around the trenches, the land is marked with holes where it has sustained heavy shelling. On the horizon, smoke billows out as artillery is fired. These conditions led to illnesses such as shell shock, when soldiers' mental health suffered because they were constantly surrounded by the threat of death and injury, as well as the noise of shells exploding.

Source A was created in 1920, by Maurice Busset, an official artist who worked for the French government during the war. He was paid to visit the trenches and record what he saw. Therefore, the image is likely to be reliable because Busset was present in the trenches and able to accurately portray what life was like. The woodcut he has produced seems to be reliable, because it is supported by my contextual knowledge that soldiers did have to live in trenches and that they would experience constant shelling as the sides fought for control over no man's land. The image also shows two trench lines joining, which could be an accurate portrayal of the different trenches, such as the frontline and reserve trenches being connected by the communication trenches.

Source B is useful because it also shows that the poor conditions in the trenches led to illnesses. Here, a soldier is described as 'standing in water for several days', which led to his feet being 'very swollen and he lost sensation'. This could be describing trench foot. When German soldiers tried to cross through Belgium to get to France, the Belgians deliberately flooded their land to slow down the advance. Much of the land that the trenches were built in was waterlogged. For example, Hill 60 was the only area of land that was not waterlogged in the Ypres Salient. Standing in damp conditions led to trench foot. Many soldiers had to have their feet amputated to stop gangrene from spreading.

The usefulness of Source B is further enhanced by its provenance. The purpose of a medical case sheet would have been to record the symptoms of a patient. There is no reason for the author (probably a medical professional) to lie or exaggerate, so we can judge the source to be reliable.

2 (b) Study Source A.

How could you follow up Source A to find out more about the link between conditions in the trenches and the illnesses soldiers suffered from?

In your answer, you must give the question you would ask and the type of source you could use. (4)

Mark scheme

You can award four marks for this question.

- 1 mark for selecting a detail in the source that could form the basis of a follow-up enquiry.
- 1 mark for an appropriate follow-up question.
- 1 mark for identifying an appropriate source to use in a follow-up enquiry.
- 1 mark for an answer that explains how the information it contains could help to answer the chosen follow-up question.

For example:

Detail in Source A that I would follow up: *The aeroplanes flying above the trenches.*

Question I would ask: *Did the new technology introduced during the war lead to more complicated injuries?*

What type of source I could use: *Army records, such as sheets detailing what technology/weapons were bought and transported to the trenches.*

How this might help answer my question: *I could find out what new weapons were used during the war and, by understanding how these worked, I could make inferences about the types of injuries soldiers sustained.*

14 Historic environment: Medical treatment on the Western Front

1a Describe **one** feature of the Royal Army Medical Corps (RAMC).

(2)

Mark scheme

You can award two marks for this question. Award one mark for a valid feature, and one mark for accurate supporting information.

An example of a two-mark answer

The RAMC was formed in 1898. (1) Initially, the RAMC only accepted male doctors but, by 1916, female doctors were also accepted. (1)

1b Describe **one** feature of the work carried out by women to help and treat injured soldiers on the Western Front.

(2)

Mark scheme

You can award two marks for this question. Award one mark for a valid feature, and one mark for accurate supporting information.

An example of a two-mark answer

Many women worked in voluntary positions, such as in the Voluntary Aid Detachment (VAD). (1) They carried out duties such as cooking for the soldiers or as ambulance drivers. (1)

2 (a) Study Sources A and B.

How useful are Sources A and B for an enquiry into treatment of wounded soldiers on the Western Front?

Explain your answer, using Sources A and B and your knowledge of the historical context. (8)

Mark scheme

Level	Marks	Explanation
1	1–2	Judgements on the usefulness of the sources are simple, and comments on the content of the sources and/or their provenance are limited. The sources have been quoted, paraphrased, or described, but a full understanding of what they mean is not demonstrated. The answer contains little contextual knowledge, and links to the source are limited.
2	3–5	Judgements on the usefulness of the sources for the specific enquiry are given, with valid criteria. Judgements are supported by developed comments about the content of the sources and/or their provenance. Some analysis of the sources is used to support the judgements on the usefulness of the sources. The answer uses contextual knowledge to support comments on the usefulness of the sources.
3	6–8	Judgements on the usefulness of the sources for the specific enquiry are given, with valid and well-chosen criteria. Judgements take into account how the provenance affects the usefulness of the source. The sources are analysed to support the judgements about their usefulness. The answer uses contextual knowledge, as part of the process of interpreting the sources and applying valid and well-chosen criteria for judgements on the sources' usefulness.

Relevant points that could be included

- Source A is useful because it shows the unaccepting attitudes towards mental health conditions such as shell shock. It was difficult for shell-shock victims to receive any form of treatment. Instead, many were treated as though they were cowards.
- The provenance of Source A also makes it useful, because it is from an official government report. It would have been written by professionals, who would have been expected to record things factually, as it is an official document. Therefore, its portrayal of contemporary attitudes is likely to be accurate.
- Source B is useful because it shows that there were developments in the use of diagnostic technology during the war. The photograph shows a mobile X-ray machine, which could be used to identify whether and where bones were broken, so that they could be set. The mobile X-ray

machine could also be used to locate shrapnel in the body, so that the shrapnel could be removed to prevent infection.

- The provenance of Source B also makes it useful because the photograph was taken in 1918. The date is important, because at the start of the war, the British Army only had two of these machines. By 1916, there was a mobile X-ray machine in every British Casualty Clearing Station. So, the photograph taken in 1918 is accurate in showing how the British Army valued these machines and invested in them.

2 (b) Study Source A.

How could you follow up Source A to find out more about treatment of wounded soldiers on the Western Front?

In your answer, you must give the question you would ask and the type of source you could use. (4)

Mark scheme

You can award four marks for this question.

- 1 mark for selecting a detail in the source that could form the basis of a follow-up enquiry.
- 1 mark for an appropriate follow-up question.
- 1 mark for identifying an appropriate source to use in a follow-up enquiry.
- 1 mark for an answer that explains how the information it contains could help answer the chosen follow-up question.

For example:

- Detail in Source A that I would follow up: *'treatment should be confined to provision of rest and comfort for those who need it and to heartening them for return to the front line.'*
- Question I would ask: *Of the men who did return to the frontline, how many suffered from further symptoms of shell shock?*
- What type of source I could use: *Hospital records showing what soldiers were admitted for and their medical history.*
- How this might help answer my question: *These records were made to document details accurately for the benefit of treating the patient correctly and understanding the illness. They would show whether soldiers had been taken off the frontline in the past for shell shock, any detail of previous treatment, and the symptoms that had returned once they were back in the trenches. This would help work out how effective (or not!) these 'treatments' were.*