Explain why there was continuity in ideas about the cause of disease during the period c.1250 – c.1500. You may use the following information in your answer: • The Church • Galen.

There was continuity in ideas about the causes of disease between 1250 and 1500 because of the dominance of the Church. The Church dominated religious understandings of disease, medical training and which stopped medical understanding from developing.

In medieval England there were religious and supernatural explanations for the cause of illness. The Church was very powerful and controlled education throughout the period, which led to the continuity of ideas. The Church taught that God was responsible for illness and disease. The Church taught that God sent disease as a punishment for sin or to cleanse the soul. Religious believers would attend church and pray, pay for special mass to be said to remove their sin and also pray. Some believers would go on pilgrimage and during the Black Death in 1348 flagellants across Europe would whip themselves to show God how sorry they were for their sins and to show that they did not need to be punished with the disease. These beliefs continued throughout the period c.1250-c.1500 because the church remained in control of education and continued to teach these ideas. Due to the power that the Church held in society, there was no challenge of the religious explanations, treatments and preventions for disease and illness.

A further reason why there was continuity in ideas regarding the causes of disease is because of the Church controlled rational explanations of the causes of disease. The Church endorsed the teachings of the ancient doctors Hippocrates and Galen who taught that disease was caused by humoral imbalance. The Church had control over book printing and medical training, and as Galen’s ideas fitted in with the Church’s teaching it was his books that were promoted widely. Additionally, Physicians were discouraged from criticising the work of Galen Which meant that there were no significant medical breakthroughs in this period. Consequently, there was very little progress in medical understanding during the Middle Ages.

Finally, there was a lack of progress in medicine during the middle ages because of a lack of scientific understanding. Due to Church control of medical training Physicians and medical students tried to make new discoveries fit into the older theories, rather than experimenting to explain the discoveries. This meant that medical understanding made very little progress in this period ad new ideas were not allowed to develop.
Explain why treatments for the Black Death were unsuccessful.

• Treatments for the Black Death were unsuccessful because they were founded on traditional, but faulty, explanations for disease.

• It was attributed to God's anger at humanity's sins, so people attempted to cure it by repenting, seeking God's forgiveness, and even whipping themselves (the flagellants). Others believed the Black Death was because of an unusual astrological position of the stars, which meant that nothing could be done apart from waiting. But these religious and supernatural solutions did not counter the natural cause of the plague.

• Natural theories like the Four Humours and miasma also produced ineffective treatments. Common cures like bleeding to rebalance the humours, or carrying strong herbs to drive off foul air did not stop the real reason for the spread of the disease, the fleas and rats carrying the plague bacteria. Indeed, it quickly became clear that physicians did not know what to do, and that for many sufferers, death was inevitable once the plague was caught.

• The only treatment that did work to some extent was escaping plague-infested areas and putting areas where the Black Death had broken out under quarantine (so nobody was allowed in or out). As a result, the bacteria that caused the disease would not be spread further, although of course this was not known in the medieval period. Thus the main reason treatments for the Black Death were unsuccessful is that they were built on explanations that were incorrect.
Assess which factor had the biggest impact on the development of understanding about the causes of disease and illness

• **Point:** Of the many factors that influenced the development of understanding about the causes of disease, *technology* had the biggest impact.

• **Evidence:** For example, *the invention of more powerful microscopes enabled scientists to discover bacteria and microbes.*

• **Analysis:** This factor meant that there was considerable progress in the understanding of disease because *scientists were then able to formulate the Germ Theory of disease.*

• **Stick to your argument:** *Technology* was more important than the other factors because it made the discovery of ‘germs’ possible, *thus overturning centuries of incorrect beliefs about the cause of disease and illness.*
Explain why some changes took place in medical knowledge during the period 1500-1700. You may use the following in your answer A) The Printing Press B) Thomas Sydenham

There were many changes that took place in medical knowledge during the period 1500-1700. It was the period of scientific discovery where new ideas sprung from different philosophers and scientists.

The invention of the Printing Press by Johannes Gutenberg allowed new ideas to spread more quickly around Europe. Before the fifteenth century, medical practitioners relied on texts that were laboriously handwritten and recopied through the centuries. This method of distributing medical information was slow, limited to only a few translations, and frequently altered the content and illustrations to the point of inaccuracy. After the invention of the printing press around 1450, however, medical texts, especially classical works by Hippocrates, Galen, and Aristotle, among others, experienced a new life and reproductions closer to the original text. Distribution of medical literature increased, translations in several languages stretched across the world, and subsequently, medical science and practice progressed rapidly.

Additionally, Thomas Sydenham was also an important individual who promoted changes in medical knowledge during the period 1500-1700. English physician Thomas Sydenham, who was known as the "English Hippocrates" stressed the importance of bedside practice and observation. Sydenham pursued medical studies, however favored practical experience over book learning. He valued close observation of symptoms rather than relying on medical books to make a diagnosis. He believed that diseases could be organised into groups and not individual to the patient. Sydenham also rejected the idea that God was behind diseases and illnesses which made his developments more rational.

Finally, Vesalius was another important individual who made changed to medical knowledge during this period. The anatomist Andreas Vesalius investigated the human body by means of dissection and changed doctors' attitudes towards the role of observation in medicine. In his most important work, On the Fabric of the Human Body of 1543, Vesalius showed that Galen was wrong on some points of human anatomy, and urged doctors to conduct systematic dissections of human corpses themselves. His work was very influential for early modern medicine both because it gave doctors more detailed knowledge of human anatomy and because it encouraged them to investigate critically the claims of ancient medical authorities. He also worked closely with artists, to ensure that illustrations were both accurate and attractive. Arguably, the conventions he established for the representation of the human body were one of the most influential.
Explain why there was such rapid change in surgical treatments in the period c1700-c1900.

There was a rapid change in surgical treatments in the 19th and 20th century due to the work of individuals such as James Simpson, Joseph Lister and because of a shift in attitudes towards safe surgery.

James Simpson’s discovery of chloroform as an effective anaesthetic was the first reason why surgical treatments changed so rapidly in this period. Before this, surgery had to be completed quickly due to excessive bleeding but also because of the amount of pain that was being endured by the patient. Earlier, laughing gas was used as an anaesthetic. However, this made patients vomit, it irritated lugs and more importantly was highly flammable. James Simpson was convinced that there were better anaesthetics. He used experiments where he and a group of friends inhaled different chemicals. They finally inhaled chloroform which caused them to pass out. This became an effective anaesthetic. Although chloroform was dangerous and could potentially kill a patient if it was not used appropriately, it was used an effective solution to pain. It allowed for longer, deeper and more complex surgeries to take place, thus allowing rapid change in surgical treatments.

Joseph Lister’s discovery of antiseptics was a second reason why surgical treatments changed so rapidly in this period. Before this, barber surgeons had not kept the areas where they worked clean when operating, and surgical instruments were not even washed. This led to many people dying of infections after surgery. Lister, however, realised that if Pasteur’s Germ Theory was correct, then it was vital to keep wounds free from microbes that caused disease. He found that carbolic spray killed off bacteria and kept wounds clean. Although not all surgeons accepted this treatment at first, in the long-term, surgeons started to recognise the importance of antiseptic and aseptic surgery. This led to developments like steam cleaned surgical instruments, rubber gloves and face masks. As a result, far fewer people died from infection after surgery. Without Lister’s demonstration of the effectiveness of carbolic acid, these improvements in surgical treatments would never have happened, compared to the rapid change that he actually inspired.

Finally, inspired by Lister and Simpson’s work, attitudes towards surgery in Britain began to change. For example, the use of chloroform as an anaesthetic was made popular because it was used by Queen Victoria during the birth of her son. Additionally, Simpson was knighted for services to medicine this was because of the impact regular use of anaesthetics had on surgery. Similarly, due to Lister’s work attitudes towards antisceptic and aseptic surgery changed. Surgeons finally understood that performing safe surgery was not only possible but their duty, this improved surgery because surgery became much cleaner and safer.
What Great Looks Like: ‘Explain why there was rapid change in the prevention of smallpox after 1798’

The three reasons why there was rapid change in the prevention of smallpox after 1798 are the invention of vaccinations by Edward Jenner, the banning of the ineffective method of inoculation, and the role of the government in promoting vaccinations.

The first turning point in the treatment of smallpox was when Edward Jenner discovered the process of vaccination. He conducted an experiment where he discovered that injecting people with cowpox meant that they became immune to contracting smallpox. Although he did not understand why this worked, it was a much more effective method of prevention than the old method of inoculation, which often resulted in the death of the patient and had not prevented numerous outbreaks of smallpox in the early 1700s.

Although the Church and the Royal Society initially resisted the use of vaccinations, they became much more popular and effective when the government banned inoculations. After a serious outbreak of smallpox in the 1830s, the government made it a crime to inoculate, which increased the rate of change in preventing smallpox as medical professionals had to use vaccinations.

Most importantly, from the 1840s the government took action to enforce the use of vaccination, which made the change in vaccination much more rapid. The government made vaccinations compulsory and used taxes to pay for children to be vaccinated. Despite continued opposition from groups like the ‘anti-vaccine league’, government intervention meant that the way smallpox was prevented changed quickly from the second half of the 19th century. It is therefore the role of the government that had the biggest impact on the changing treatment of smallpox.