



EDX.MED6 Medicine in Britain, c1250-present: Change and Continuity in the Treatment and Prevention of Disease

EDEXCEL 1HI0 · Calculators not allowed · about 65 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Write in full sentences for Questions 15, 16 and 17. You are advised to spend about 65 minutes on this pack.

- 1** Name the treatment, based on the Theory of the Four Humours, that involved cutting a vein or applying leeches, and which remained in use from the medieval period into the nineteenth century.

(Total for Question 1 is 1 mark)

- 2** State one similarity between medieval treatments (c1250-1500) and treatments used in the years c1500-1700.

(Total for Question 2 is 2 marks)

- 3** Name the vaccination Edward Jenner developed against smallpox in 1796, using material from a related but milder disease.

(Total for Question 3 is 1 mark)

- 4** Name the surgeon who introduced carbolic acid as an antiseptic in surgery from 1865, based on Pasteur's Germ Theory.

(Total for Question 4 is 1 mark)

- 5** State one way in which the treatment of infection changed between the years c1700-1900 and the years c1900-present.

(Total for Question 5 is 2 marks)

- 6** Name the two anaesthetics introduced into British surgery in the 1840s that allowed patients to be operated on without being conscious.

(Total for Question 6 is 2 marks)

- 7** Name the government minister who established the NHS in 1948, providing free medical treatment for the whole population for the first time.

(Total for Question 7 is 1 mark)

- 8** State two developments that expanded the range of surgery surgeons could safely perform by the early twentieth century, compared with the mid-nineteenth century.

(Total for Question 8 is 2 marks)

- 9** Give the decade in which penicillin first became widely available as a mass-produced medicine.

(Total for Question 9 is 1 mark)

- 10** Name one government Act, passed in the nineteenth century, that required local authorities to improve public health provision such as clean water and sewage disposal.

(Total for Question 10 is 1 mark)

- 11** State one way in which prevention of disease in modern Britain (c1900-present) resembles prevention of disease in the years c1700-1900.

(Total for Question 11 is 2 marks)

- 12** Name the modern surgical technique, using small incisions and a camera, that reduces damage to the patient's body compared to traditional open surgery.

(Total for Question 12 is 1 mark)

- 13** Explain two ways in which the treatment of disease and injury changed between the years c1250-1500 and c1900-present.

(Total for Question 13 is 4 marks)

- 14** Describe two ways in which government involvement in preventing disease increased between the years c1700-1900 and c1900-present.

(Total for Question 14 is 4 marks)

15 Explain why surgery became significantly safer between the mid-nineteenth century and the early twentieth century.

(Total for Question 15 is 8 marks)

16 Explain why government action became increasingly important in preventing disease in Britain in the years c1700-present.

(Total for Question 16 is 8 marks)

17 'War has been the main reason for change in the treatment of disease and injury in Britain in the years c1250-present.' How far do you agree with this statement? Explain your answer.

(Total for Question 17 is 16 marks)

Mark scheme · EDX.MED6 Medicine in Britain, c1250-present: Change and Continuity in the Treatment and Prevention of Disease

Question 1

- **B1** bloodletting (venesection)
- **Answer: Bloodletting**

Question 2

- **B1** bloodletting and purging, based on humoural theory, continued to be widely used in both periods
- **B1** herbal remedies, prepared by apothecaries or wise women, also continued to be used in both periods
- **Answer: Bloodletting/purging and herbal remedies continued to be used in both periods.**

Question 3

- **B1** the smallpox vaccination (using cowpox)
- **Answer: The smallpox vaccination, using cowpox**

Question 4

- **B1** Joseph Lister
- **Answer: Joseph Lister**

Question 5

- **B1** by the early twentieth century, antiseptic techniques developed by Lister had reduced infection during surgery, but there was still no drug that could cure an infection already established in the body
- **B1** from the early 1940s, the mass production of penicillin, developed by Florey and Chain, gave doctors an effective medicine that could actually cure many established bacterial infections
- **Answer: Antiseptic surgery reduced infection risk by 1900, but only from the 1940s did penicillin allow doctors to actually cure an existing bacterial infection.**

Question 6

- **B1** ether (first used in a British operation in December 1846)
- **B1** chloroform (introduced by James Simpson in 1847)
- **Answer: Ether and chloroform**

Question 7

- **B1** Aneurin Bevan
- **Answer: Aneurin Bevan**

Question 8

- **B1** anaesthetics, which removed the problem of pain and allowed longer, more careful operations
- **B1** antiseptic/aseptic techniques, which removed the problem of infection
- **Answer: Anaesthetics (solving pain) and antiseptic/aseptic techniques (solving infection).**

Question 9

- **B1** the 1940s
- **Answer: The 1940s**

Question 10

- **B1** the Public Health Act 1875 (accept the Public Health Act 1848)
- **Answer: The Public Health Act 1875**

Question 11

- **B1** vaccination programmes were used in both periods to prevent infectious disease across the population: compulsory smallpox vaccination in the nineteenth century, and modern immunisation programmes, e.g. against measles or polio, today
- **B1** both periods also saw government legislation aimed at improving public health, such as the Public Health Acts and, later, laws such as the 2007 smoking ban
- **Answer: Both periods used government-backed vaccination programmes and public health legislation to prevent disease.**

Question 12

- **B1** keyhole surgery (minimally invasive surgery)
- **Answer: Keyhole surgery**

Question 13

- **B2** medieval treatment relied on unproven remedies based on the Four Humours, such as bloodletting and purging, whereas by the twentieth century treatments such as penicillin were based on scientifically tested understanding of bacteria
- **B2** medieval surgery was extremely limited by pain and infection, whereas by the twentieth century anaesthetics, antiseptic/aseptic surgery and blood transfusion allowed far more complex and safer operations
- **Answer: Treatment moved from unproven humoral remedies to scientifically tested drugs, and surgery moved from being limited by pain/infection to using anaesthetics, antiseptics and transfusion.**

Question 14

- **B2** nineteenth-century developments such as the compulsory Vaccination Acts of 1853 and 1867, and the Public Health Act of 1875, began to require or encourage measures such as vaccination and improved sanitation
- **B2** twentieth and twenty-first century developments such as the creation of the NHS in 1948, providing free healthcare and organised national immunisation programmes, and legislation such as the 2007 smoking ban, showed government taking a wider and more direct role in preventing illness across the whole population
- **Answer: Nineteenth-century compulsory vaccination and public health Acts developed into twentieth-century NHS-run immunisation programmes and lifestyle legislation such as the smoking ban.**

Question 15

- **Level 1** (1-2): Identifies one or two general reasons why surgery became safer, with little or no supporting detail or explanation.
- **Level 2** (3-4): Identifies and begins to explain one reason, supported by accurate detail.
- **Level 3** (5-6): Explains two reasons why surgery became safer, each supported by accurate and relevant detail.
- **Level 4** (7-8): Explains two or more reasons in a well-developed, logically structured way, supported throughout by precise and accurate detail, showing how the reasons connect.
- **Indicative content:**
 - The introduction of anaesthetics, especially ether from 1846 and chloroform from 1847, pioneered by James Simpson, removed the problem of pain during operations, meaning surgeons no longer had to work at high speed and could attempt more complex procedures.
 - Joseph Lister's use of carbolic acid as an antiseptic from 1865, based on Pasteur's Germ Theory, significantly reduced deaths from post-operative infection, a problem that had previously killed many patients who survived the operation itself.
 - As Germ Theory became more widely accepted, surgical practice moved from antiseptic methods, killing germs already present, towards aseptic methods, preventing germs from being present at all, such as sterilising instruments and wearing sterile gowns and masks, further reducing infection risk.
 - Improvements in blood transfusion, developed and refined especially during the First World War, for example Oswald Robertson's use of sodium citrate to store blood from 1917, meant that patients who lost significant blood during surgery could be treated, reducing deaths from blood loss.

Question 16

- **Level 1** (1-2): Identifies one or two general reasons for growing government action, with little or no supporting detail or explanation.
- **Level 2** (3-4): Identifies and begins to explain one reason, supported by accurate detail.
- **Level 3** (5-6): Explains two reasons for growing government action, each supported by accurate and relevant detail.
- **Level 4** (7-8): Explains two or more reasons in a well-developed, logically structured way, supported throughout by precise and accurate detail, showing how the reasons connect.
- **Indicative content:**
 - Once Germ Theory, from 1861, provided scientific evidence that dirty water, poor sanitation and overcrowding spread disease, government had a firm scientific basis for requiring towns to improve public health, leading to legislation such as the compulsory Public Health Act of 1875.
 - The compulsory Vaccination Acts of 1853 and 1867 showed government moving from voluntary encouragement to legal requirement in disease prevention, recognising that individual choice alone was not achieving high enough vaccination rates to protect the wider population.
 - In the twentieth century, the creation of the NHS in 1948 gave government direct responsibility for organising not just treatment but also national prevention programmes, such as immunisation campaigns against diseases like measles and polio.
 - More recently, government has extended prevention into regulating behaviour and lifestyle, for example the 2007 ban on smoking in enclosed public places, reflecting growing scientific understanding of lifestyle-related causes of disease alongside infectious ones.

Question 17

- **Level 1** (1-4): Shows limited relevant knowledge of treatment across the period, and offers only a simple, unsupported opinion on the statement.
- **Level 2** (5-8): Shows some relevant knowledge and identifies relevant factors, but the argument is only partly supported and lacks a developed judgement on how far the statement is accurate.
- **Level 3** (9-12): Shows good relevant knowledge and explains a range of factors, reaching a supported judgement on how far the statement is accurate, with some links made between factors.
- **Level 4** (13-16): Shows precise, well-selected knowledge and explains a range of factors in a balanced way, reaching a fully supported and sustained judgement on how far the statement is accurate, with clear analytical links between factors and consistently accurate use of specialist historical terminology.
- **Indicative content:**
 - Supporting the statement: the First World War accelerated important developments such as blood transfusion techniques, for example Robertson's use of sodium citrate from 1917, and plastic surgery, for example Gillies's work at Sidcup, driven by the urgent need to treat large numbers of severely wounded soldiers.
 - Supporting the statement: the Second World War provided the funding and urgency that turned Fleming's 1928 discovery of penicillin into a mass-produced medicine by the mid-1940s, saving many lives from infected wounds among Allied forces.
 - Against the statement: many of the most significant developments in this period had nothing to do with war, such as Vesalius's anatomical corrections in the 1540s, Jenner's smallpox vaccination in 1796, and the creation of the NHS in 1948, which resulted from social and political reform rather than conflict.
 - Against the statement: the discovery of the true cause of disease through Germ Theory, by Pasteur and Koch from the 1860s to the 1880s, was the result of civilian scientific research in peacetime, and this scientific understanding underpinned much of the wartime medical progress that followed, since Lister's antiseptic surgery, developed decades before the First World War, was based on Germ Theory, not conflict.
 - Against the statement: government policy and legislation, such as the Public Health Acts of the nineteenth century and the founding of the NHS, changed how widely available treatment was, independent of any war.
 - A balanced judgement might argue that war acted as a powerful accelerator that sped up the practical application of medical knowledge already developing in peacetime, such as Germ Theory or Fleming's initial 1928 discovery, rather than being the ultimate root cause of medical progress across the whole period.