1.5 Medicine in Britain, c1900-present: War, Science and the Development of Penicillin: 10-minute Pack

EDEXCEL 1HI0 · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. You are advised to spend about 10 minutes on this pack.

1 Give the year in which the National Health Service was launched in Britain, providing healthcare free at the point of use.

(Total for Question 1 is 1 mark)

2 Name the government minister, in the Labour government led by Clement Attlee, responsible for founding the NHS.

(Total for Question 2 is 1 mark)

3 Explain why it took over a decade for penicillin to become a widely available medicine after Alexander Fleming's discovery in 1928.

(Total for Question 3 is 8 marks)

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Mark scheme · 1.5 Medicine in Britain, c1900-present: War, Science and the Development of Penicillin: 10-minute Pack

Question 1

1948 **B1**

Answer: 1948

Question 2

Aneurin Bevan **B1**

Answer: Aneurin Bevan

Question 3

Level 1 Identifies one or two general reasons for the delay, with little or no supporting detail or explanation. **1-2**

Level 2 Identifies and begins to explain one reason, supported by accurate detail. **3-4**

Level 3 Explains two reasons for the delay, each supported by accurate and relevant detail. **5-6**

Level 4 Explains two or more reasons in a well-developed, logically structured way, supported throughout by precise and accurate detail, showing how the reasons connect. **7-8**

Indicative content:

- Fleming discovered penicillin's antibacterial effect in 1928 by chance, but he lacked the chemistry expertise and resources to extract and purify it into a stable, usable drug, and did not fully follow up his own findings.
- Producing enough pure penicillin was extremely difficult and expensive; it took the specialist chemistry and biological research of Howard Florey and Ernst Chain, and the practical laboratory skills of Norman Heatley, at Oxford in the late 1930s and early 1940s, to work out a method of extracting and purifying usable quantities.
- Testing and scaling up production safely took further time and resources, and Britain's wartime economy, under pressure from the war effort, could not divert enough industrial capacity to mass production, so American pharmaceutical companies took on large-scale manufacture from 1943.
- Government and military priorities during the Second World War, especially the urgent need to treat infected wounds among Allied soldiers before the 1944 D-Day landings, provided the funding and urgency that finally accelerated penicillin from a laboratory discovery into a mass-produced medicine.

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