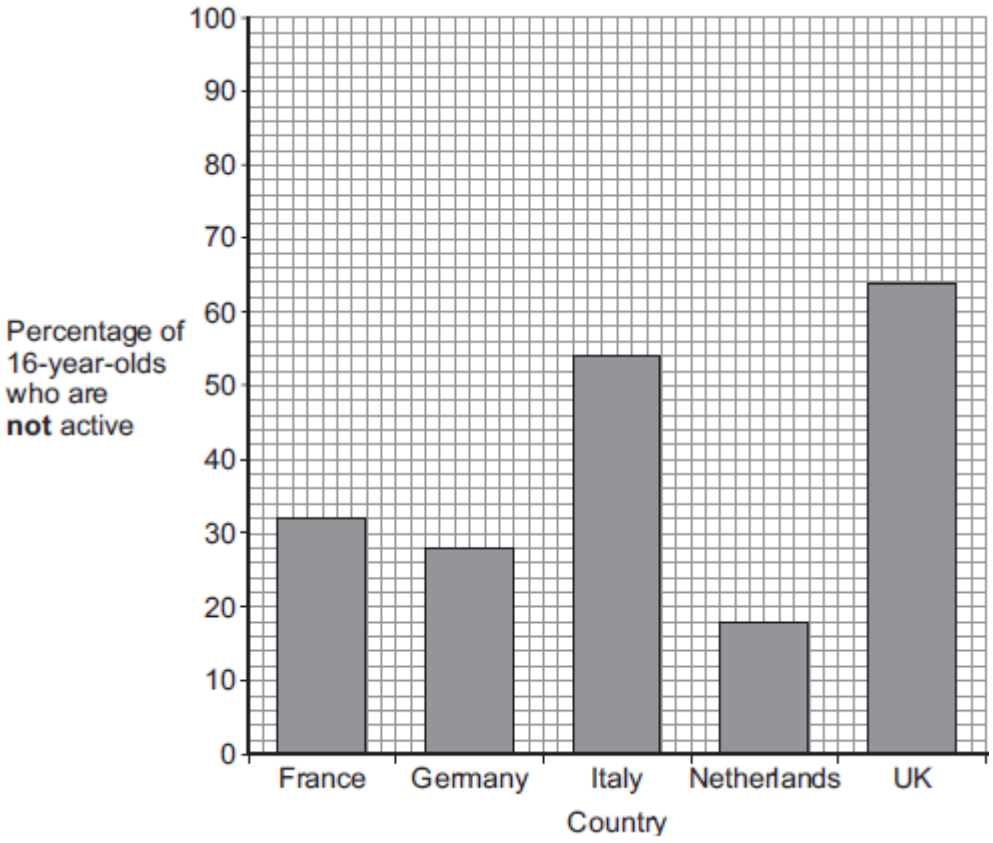
Q1.

Scientists investigated the effect of different factors on health.

(a) People who are **not** active may have health problems.

The graph shows the percentage of 16-year-olds in some countries who are **not** active.



(i) What percentage of 16-year-olds in the UK are **not** active?

_____ %

(1)

(ii) What percentage of 16-year-olds in the UK are **active**?

_____ %

(1)

(iii) A newspaper headline states:

People in the UK are the laziest in the world.

Information in **Figure 1** does **not** support the newspaper headline.

Suggest **one** reason why the newspaper headline may be wrong.

_____

_____

(1)

(b) Doctors gave a percentage rating to the health of 16-year-olds.
100% is perfect health.

The table shows the amount of exercise 16-year-olds do and their health rating.

Amount of exercise done in minutes every week	**Health rating as %**
Less than 30	72
90	76
180	82
300	92

What conclusion can be made about the effect of exercise on health?

Use information from the table.

_____

_____

(1)

(c) Inherited factors can also affect health.

Give **one** health problem that may be affected by the genes someone inherits.

Draw a ring around the correct answer.

being malnourished **having a high cholesterol level** **having a deficiency disease**

(1)

(d) White blood cells are part of the immune system.

Use the correct answer from the box to complete each sentence.

antibiotics	**antibodies**	**pathogens**	**vaccines**

(i) When we are ill, white blood cells produce _____ to kill microorganisms.

(1)

(ii) Many strains of bacteria, including MRSA, have developed resistance to drugs called

_____

(1)

(Total 7 marks)

Q2.

Scientists estimate that about one third of cancers in the UK may be linked to obesity.

Name **two** diseases linked to obesity.

Do **not** give cancer as one of your answers.

1. _____

2. _____

(Total 2 marks)

Q3.

The concentration of cholesterol in the blood affects people's health.

(a) Give **two** factors that affect the concentration of cholesterol in the blood.

1. _____

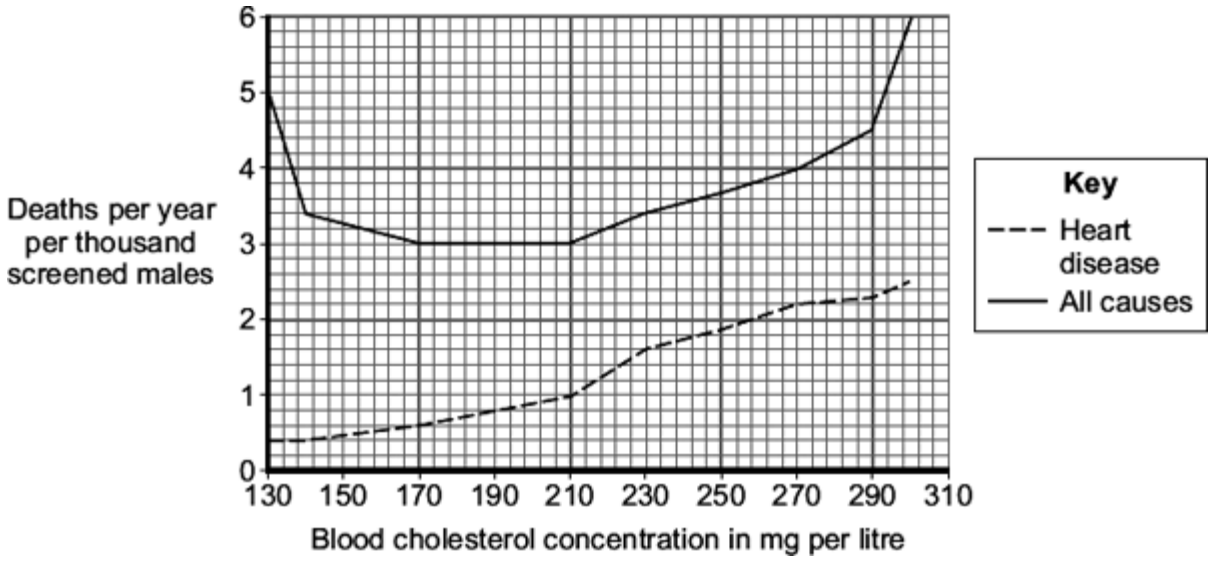
2. _____

(2)

(b) Doctors screened men for blood cholesterol concentration.

The doctors then compared death rates from heart disease with deaths from all causes in this screened group.

The graph shows the results.



(i) Which is the best conclusion that can be drawn from the data?

Tick (✓) **one** box.

There is a positive correlation between blood cholesterol concentration and deaths from all causes. ☐

There is a negative correlation between blood cholesterol concentration and deaths from all causes. ☐

Blood cholesterol concentration is only one of several factors affecting death from all causes. ☐

(1)

(ii) Based on the data in the graph **only**, which is the ideal range for blood cholesterol concentration?

Range _____ to _____ mg cholesterol per litre.

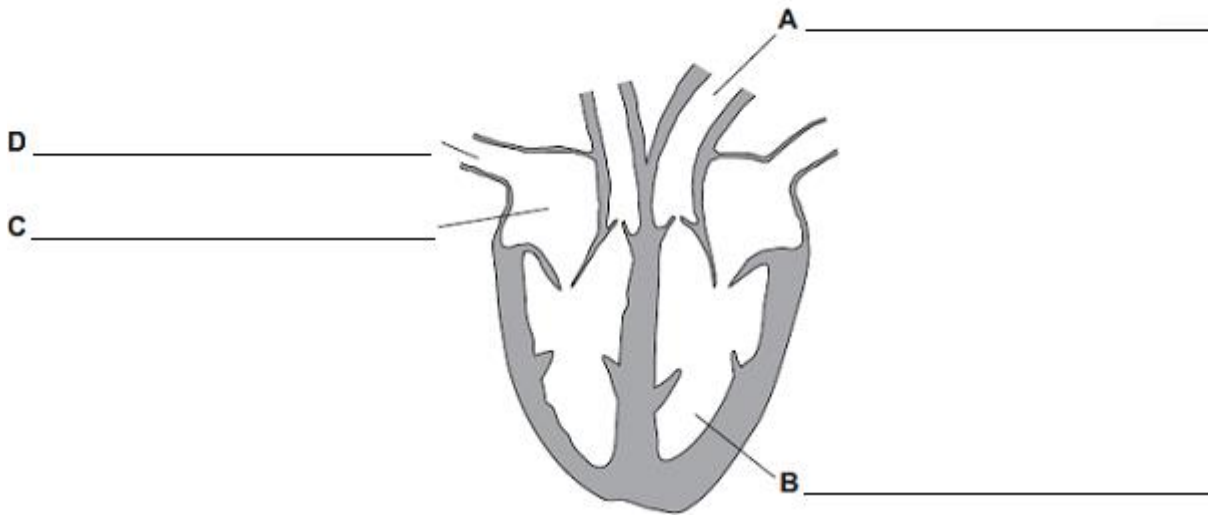
(1)

(Total 4 marks)

Q4.

Diagram 1 shows a section through the heart.

Diagram 1



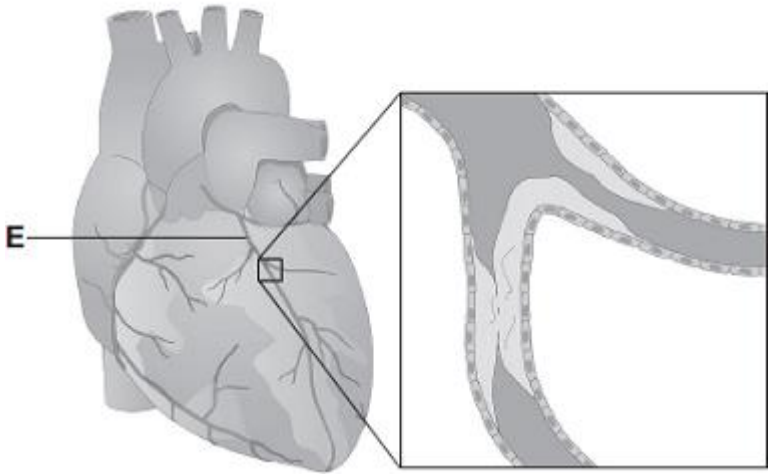
(a) On the diagram, name the parts labelled **A**, **B**, **C** and **D**.

(4)

(b) **Diagram 2** shows the blood vessels that supply the heart muscle.

Part of one of the blood vessels has become narrower.

Diagram 2



© Peter Gardiner/Science Photo Library

(i) Name blood vessel **E**.

_____

(1)

(ii) Give **one** method of treating the narrowed part of blood vessel **E**.

_____

(1)

(iii) Explain how the method of treatment works.

_____

_____

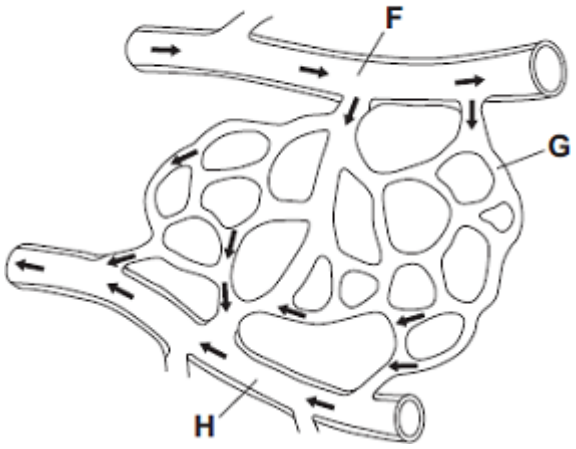
_____

_____

(2)

(c) **Diagram 3** shows part of the blood supply in the lungs.

Diagram 3



(i) Name the types of blood vessel labelled **F**, **G** and **H**.

F _____

G _____

H _____

(3)

(ii) Give **one** way in which the composition of the blood in vessel **F** is different from the composition of the blood in vessel **H**.

_____

_____

(1)

(Total 12 marks)