

Name of the Student: _____

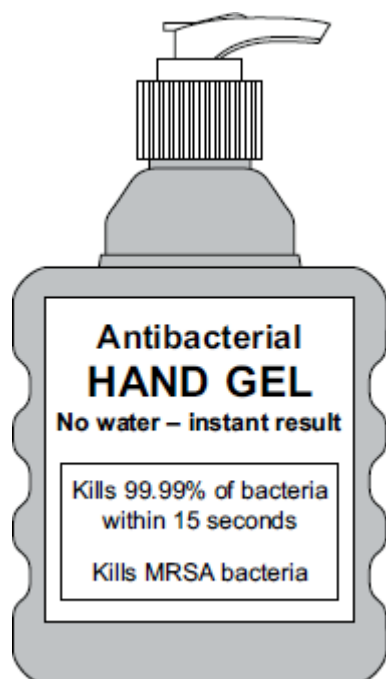
Max. Marks : 24 Marks

Time : 24 Minutes

Q1.

MRSA strains of bacteria are causing problems in many hospitals.

- (a) The diagram shows a hand-gel dispenser.



Hand-gel dispensers are now placed at the entrance of most hospital wards.

Explain why.

(2)

- (b) Explain, as fully as you can, how MRSA strains of bacteria became difficult to treat.

(3)
(Total 5 marks)

Q2.

The body's immune system protects us from diseases.

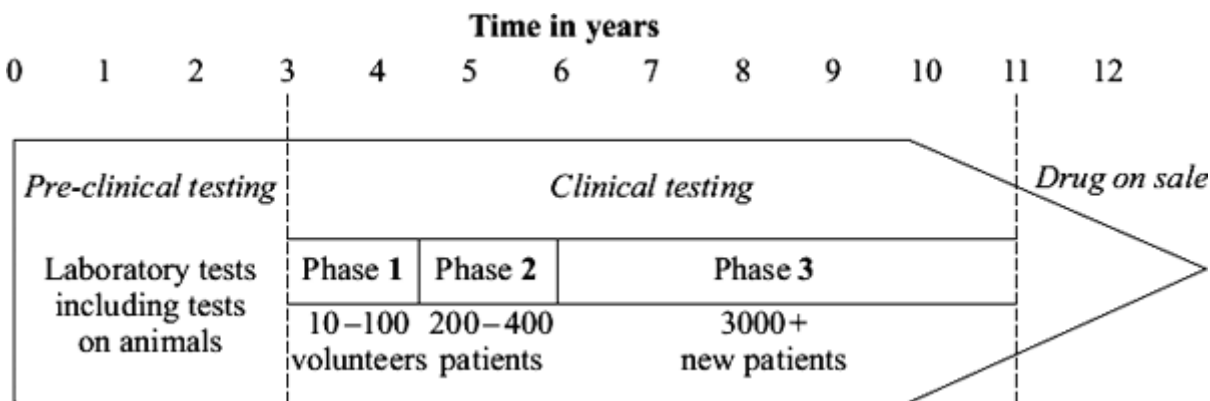
Describe the different ways in which white blood cells protect us from infectious diseases.

(Total 4 marks)

Q3.

New drugs have to be thoroughly tested before they are sold.

The diagram shows a time line for the testing of a new drug.



(a) What is the main purpose of *pre-clinical testing*?

(1)

(b) In Phase **1** of the *clinical testing*, very low doses of the new drug are used on a small number of volunteers.

(i) What is the main purpose of Phase **1** testing?

(1)

(ii) In Phase **1** testing, healthy volunteers are used rather than patients.

Suggest **one** reason for this.

(1)

(c) What is the main purpose of the Phase **2** and Phase **3** testing?

(1)

(d) During Phase **3** testing, many of the patients are given a *placebo*.

(i) What is meant by a *placebo*?

(1)

(ii) During the testing, who knows which patients are receiving the *placebo*?

Tick (✓) **one** box.

Only the patients

☐

Only the doctors

☐

Both patients and doctors

☐

Neither patients nor doctors

☐

(1)

(Total 6 marks)

Q4.

Diet and exercise affect health.

- (a) Many people are obese (very overweight).

Obesity can lead to heart disease.

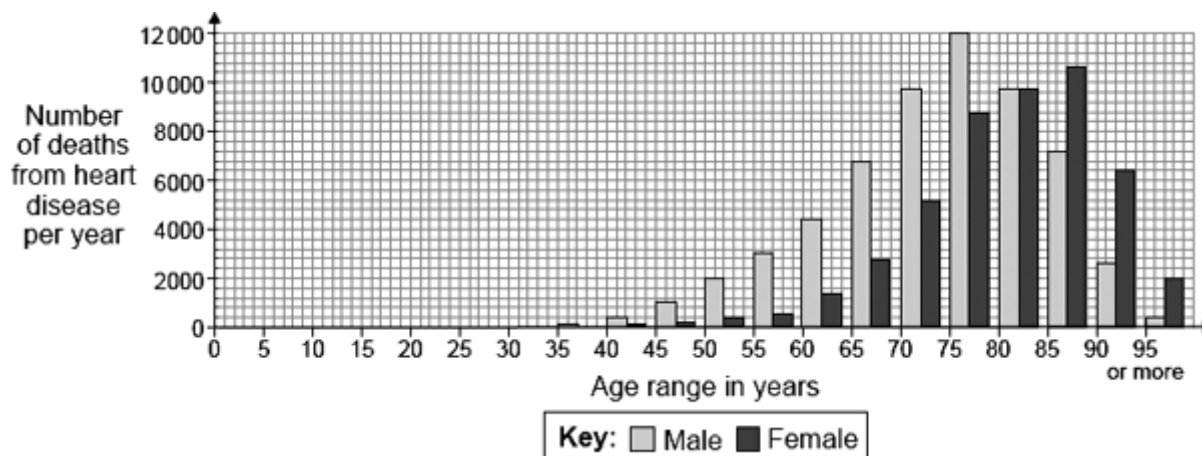
Other than heart disease, name **two** conditions which are linked to obesity.

1. _____

2. _____

(2)

- (b) The graph shows the number of deaths from heart disease each year in the UK.



The pattern for deaths from heart disease in men is different from the pattern in women.

- (i) Give **two** differences between the patterns for men and women.

1. _____

2. _____

(2)

- (ii) Suggest **two** reasons for the difference in the number of deaths from heart disease in men and women between the ages of 40 and 60.

1. _____

2. _____

(2)

- (c) Scientists have developed drugs to reduce the concentration of cholesterol in the blood.

Give the **three** main stages in testing a new drug before it is sold to the public.

1. _____

2. _____

3. _____

(3)

(Total 9 marks)