Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B3 Infection And Response

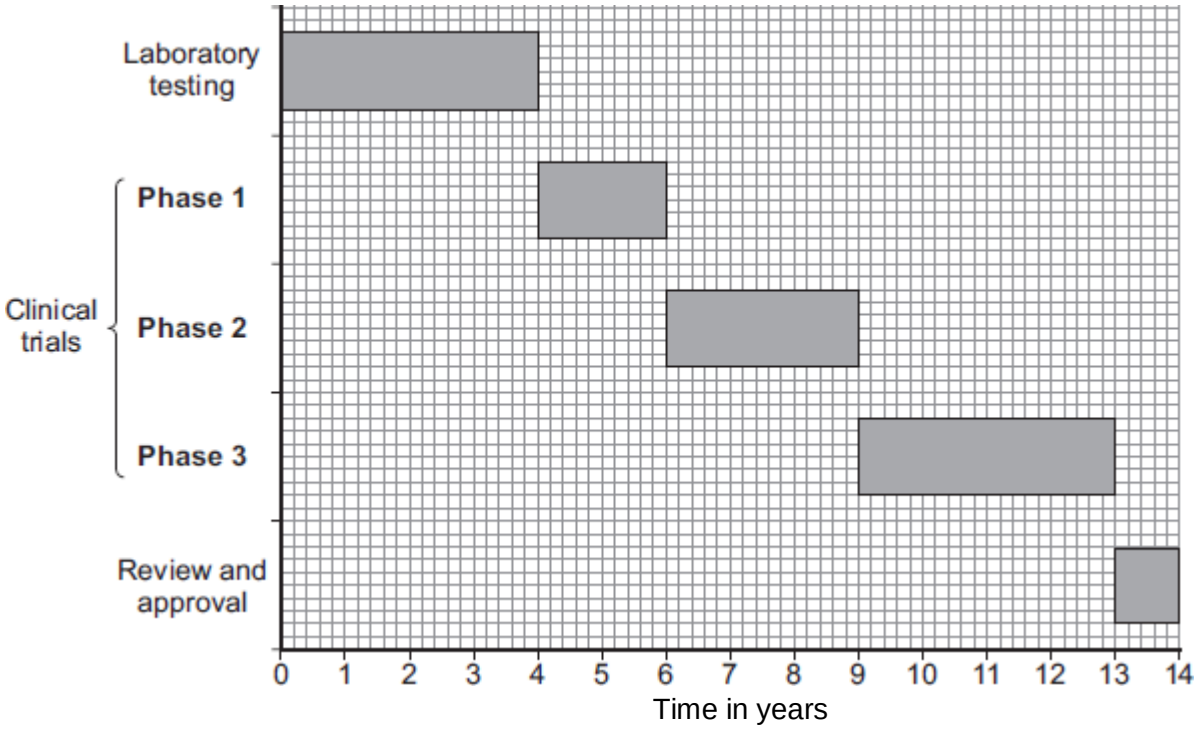
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Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Q1.

New drugs have to be tested before they can be sold.

The graph shows how much time the different stages of testing took for a new drug.



(a) (i) How much time did the laboratory testing of the drug take?

_____ years

(1)

(ii) Suggest what the drug was tested on during laboratory testing.

_____

(1)

(b) Clinical trials are carried out on human volunteers and patients.

(i) How much time did the clinical trials take for this drug?

_____

_____ years

(2)

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(ii) During **Phase 1** clinical trials, the drug is tested on healthy volunteers using low doses.

Draw a ring around the correct answer to complete the sentence.

The reason for **Phase 1** testing is to

find the best dose.
see if the drug works.
see if the drug has side effects.

(1)

(iii) During **Phase 2** and **Phase 3** clinical trials, half of the volunteers are given a fake drug called a placebo in a double blind trial.

In a double blind trial, who knows which volunteers are given the drug and which volunteers are given the placebo?

Tick (✓) **one** box.

	Tick (✓)
The doctors but not the volunteers	
The doctors and the volunteers	
The volunteers but not the doctors	
Neither the volunteers nor the doctors	

(1)

(Total 6 marks)

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Q2.

The body defends itself against pathogens.

(a) Give **three** ways that white blood cells defend the body against pathogens.

Tick (✓) **three** boxes.

Ingest pathogens	☐
Produce antibiotics	☐
Produce antibodies	☐
Produce antibodies	☐
Produce antitoxins	☐
Produce vaccines	☐
Stop pathogens entering the body	☐

(3)

(b) Bacterial infections can be treated with antibiotics.

Sometimes bacteria are resistant to antibiotics.

What does *resistant to antibiotics* mean?

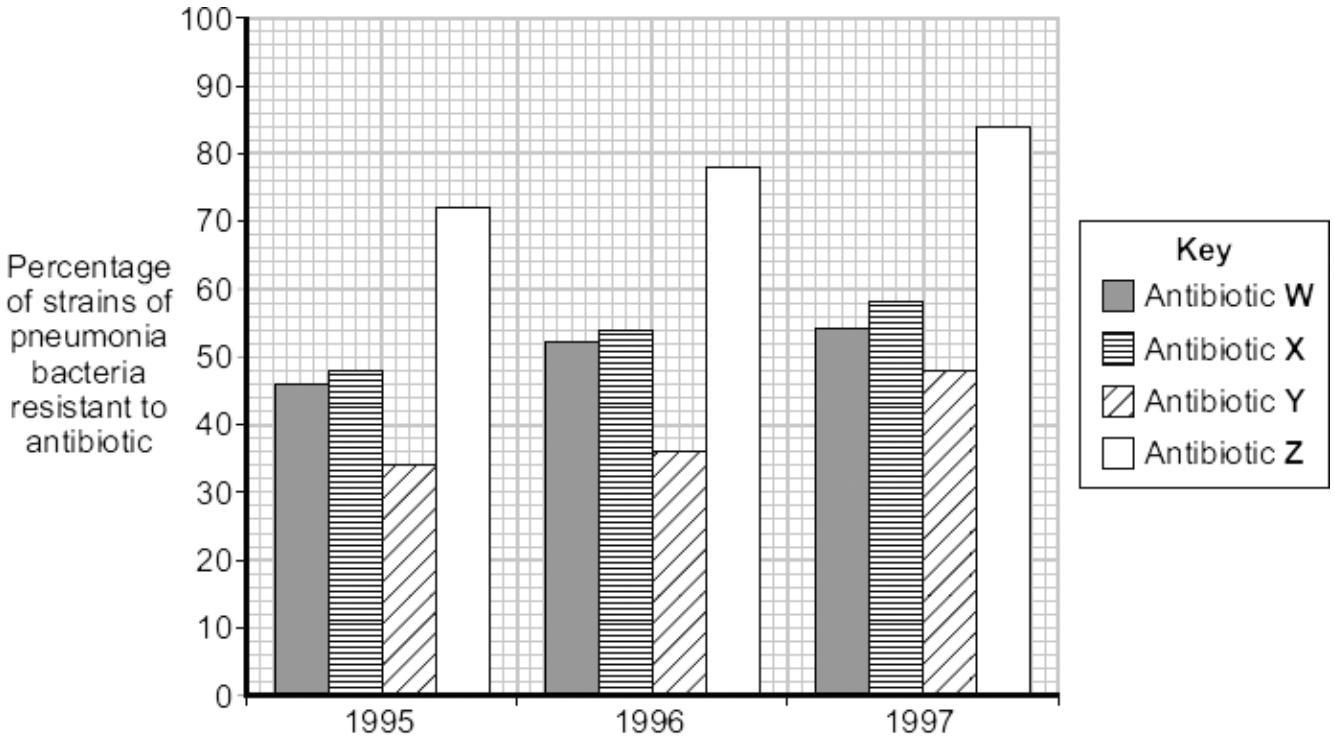
_____

_____

(1)

(c) The bar chart shows how the percentage of strains of pneumonia bacteria that are resistant to four different antibiotics changed between 1995 and 1997.

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(i) Which would have been the best antibiotic to use against pneumonia bacteria in 1995?

Write the correct answer in the box. Antibiotic ☐

(1)

(ii) Calculate the change in the percentage of strains of pneumonia bacteria resistant to antibiotic **W** between 1995 and 1997.

Show clearly how you work out your answer.

_____

_____

Answer = _____ %

(2)

(iii) Suggest **two** possible reasons for this change in the number of strains of pneumonia bacteria resistant to antibiotic **W**.

1. _____

2. _____

(2)

(Total 9 marks)

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Q3.

Drugs affect our body chemistry.

(a) **List A** gives the names of some drugs.
List B gives the uses of some drugs.

Draw **one** line from each drug in **List A** to the use of the drug in **List B**.

List A **Drug**	**List B** **Use**
	To increase fertility in women
Anabolic steroid	
	To treat leprosy
Statin	
	To stimulate muscle growth
Thalidomide	
	To reduce the risk of heart and circulatory diseases

(3)

(b) A new drug was trialled on 80 healthy volunteers.
The volunteers were asked to report any side effects.

The results of the trial are shown in the table.

Reported effects	**Number of volunteers**
No side effects	20
Severe sickness	42
Itchy skin	18

Based on the results of this trial, what should the drug company do next?

Tick (✓) **one** box.

Test on a small group of patients to find the optimum dose ☐

Test on a large group of patients to see if the drug works on ill people ☐

Stop the trial ☐

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Give a reason for your answer.

_____

_____

(2)
(Total 5 marks)

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