

15. Drugs

15.1 Drugs

Paper 3 and 4

Question Paper

Paper 3

Questions are applicable for both core and extended candidates

1 (a) Antibiotics are a type of drug.

The box on the left contains the beginning of a sentence.

The boxes on the right show some sentence endings.

Draw lines to link the phrase 'Antibiotic drugs' on the left to **three** boxes on the right to make **three** correct sentences.

Antibiotic drugs

affect chemical reactions in the body.

are less effective against organisms that show resistance.

are used to cure coronary heart disease.

are the main cause of rickets.

kill bacteria.

kill viruses.

[3]

(b) Fig. 5.1 shows the number of antibiotic doses given per 1000 people per day in six different countries.

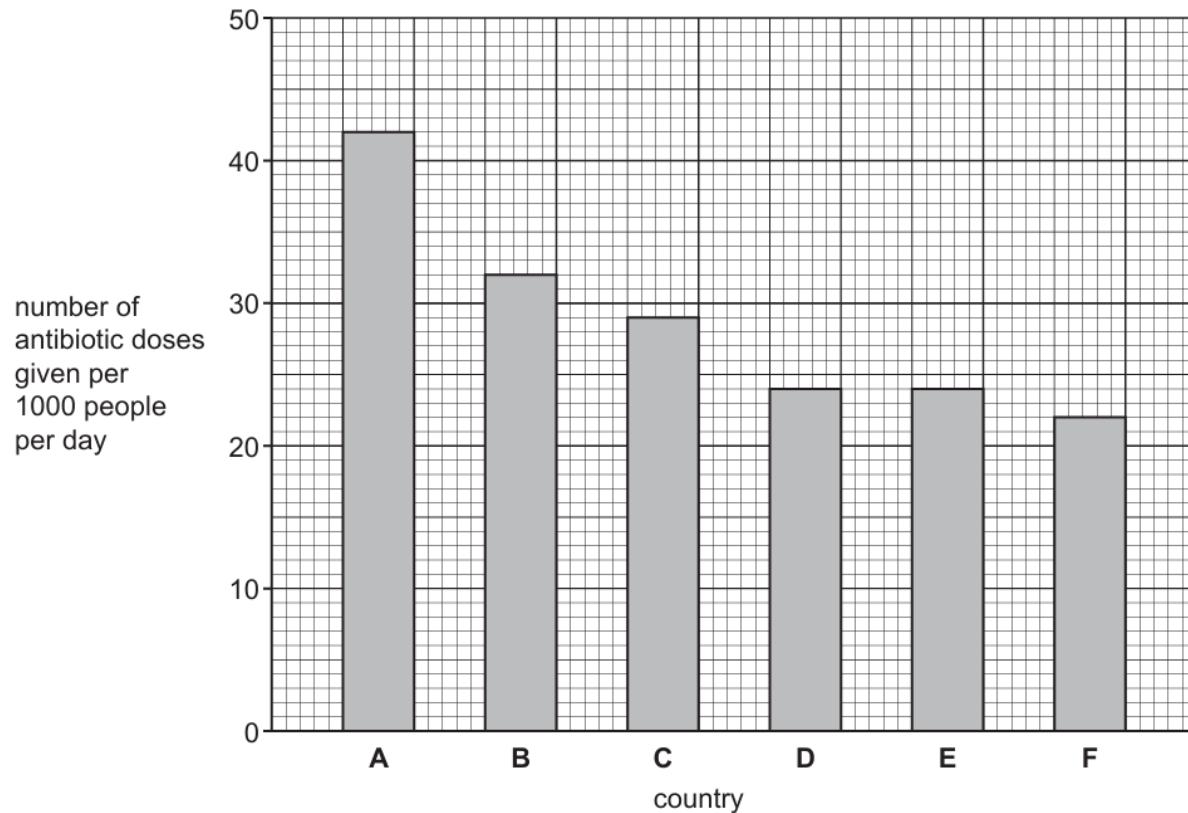


Fig. 5.1

(i) Calculate the difference in the number of antibiotic doses given per 1000 people per day between country **A** and country **F** in Fig. 5.1.

number of antibiotic doses given per 1000 people per day in country **A**

..... doses

number of antibiotic doses given per 1000 people per day in country **F**

..... doses

difference doses
[2]

(ii) Using the information in Fig. 5.1, state the **two** countries that gave the same number of antibiotic doses per 1000 people per day.

..... and [1]

[Total: 6]

2 (c) Some drugs can decrease the breathing rate.

Define what is meant by the term drug.

.....
.....
.....
.....
.....

[2]

3 (c) Drugs can alter the chemical reactions in the body.

State the names of **two** drugs that can act as depressants.

1
2

[2]

4 (a) Fig. 3.1 shows the number of deaths in one country that were due to excessive alcohol consumption.

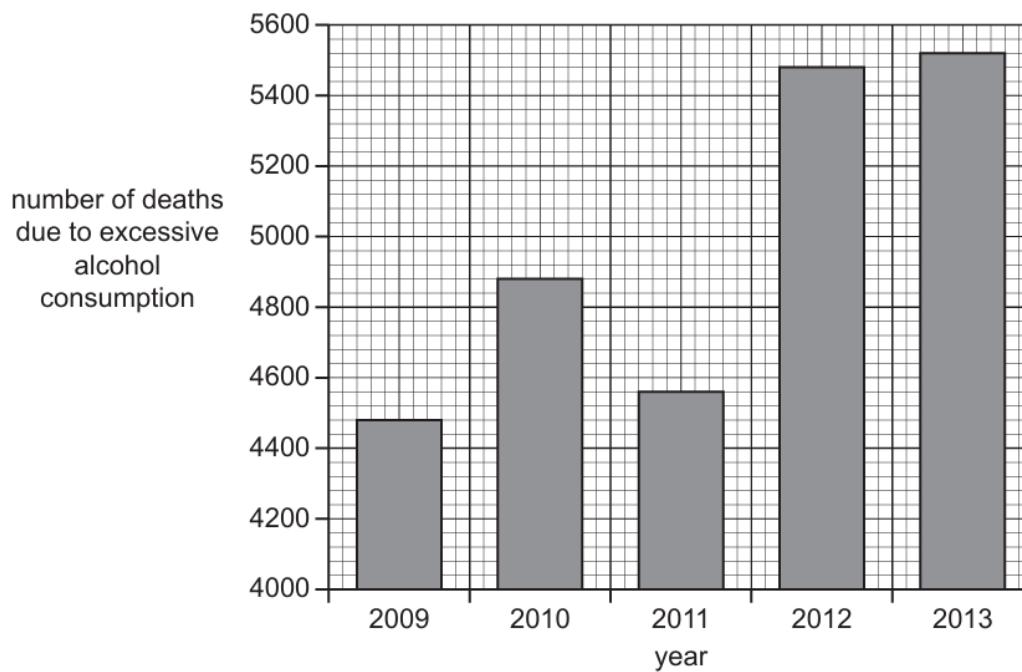


Fig. 3.1

Describe the results shown in Fig. 3.1.

Use the data to support your answer.

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.....

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.....

.....

.....

[3]

(b) Describe **two** short-term effects of excessive alcohol consumption on the nervous system.

1

.....
2

.....
[2]

(c) State the name of **one** organ damaged by long-term excessive alcohol consumption.

.....
[1]

5 (a) Define the term drug.

.....
.....
.....

[2]

(b) Antibiotics are a type of drug.

State the type of infection antibiotics are used to treat.

.....

[1]

(c) Table 6.1 shows the year in which three different types of antibiotics were first used and the year that antibiotic resistance was first detected.

Table 6.1

antibiotic	year of first use	year resistance first detected
A	1952	1988
B	1962	1973
C	2000	2003

Compare the data for the three antibiotics in Table 6.1.

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.....
.....
.....
.....
.....
.....
.....

[3]

(d) The body has defences against infections caused by pathogens.

State **three** body defences that prevent pathogens from entering the body.

1

2

3

[3]

[Total: 9]

6 (c) Describe the harmful effects of tobacco smoke on the body.

.....

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[4]

Paper 4

Questions are applicable for both core and extended candidates unless indicated in the question

7 (c) (i) Describe how the use of antibiotics can be managed to reduce the development of resistant strains of bacteria. **(extended only)**

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.....
.....
.....
.....

[2]

(ii) Suggest why MRSA is unlikely to be transmitted from a mother to her unborn fetus. **(extended only)**

.....
.....
.....

[1]

8 (d) A scientific paper was published in 1997 that described the effects of anabolic steroids on female athletes. Many of these athletes achieved great success in international sport competitions during the 1960s and 1970s.

Discuss the arguments against the use of anabolic steroids in sport.

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.....
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.....
.....

[3]

9 (b) State the name of a type of drug that can be used to treat bacterial infections.

..... [1]

10 (c) TB is a disease that can be treated with antibiotics. HIV infection cannot be treated with antibiotics.

Explain why viral diseases **cannot** be treated with antibiotics.

.....
.....
.....
.....
.....

..... [2]

11 Microbiologists test strains of bacteria for antibiotic resistance.

They do this by soaking paper discs in antibiotics and placing them on bacteria growing in Petri dishes.

The paper discs in the centre of Petri dishes **E** and **F** in Fig. 2.1 have been soaked in penicillin.

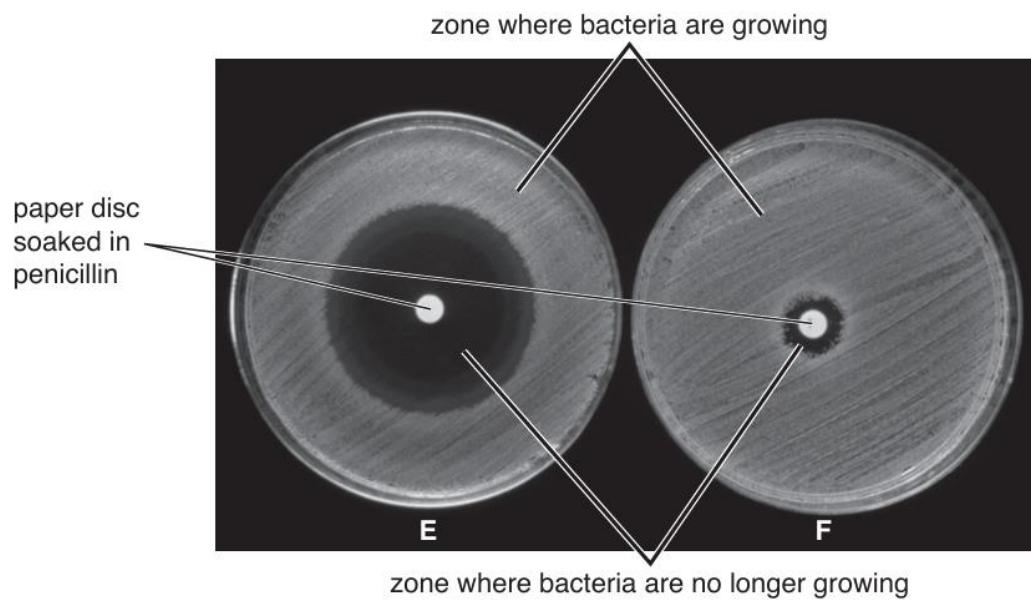


Fig. 2.1

(a) State the **type** of microorganism that produces penicillin.

..... [1]

(b) State **and** explain the evidence from Fig. 2.1 that suggests that the bacteria in dish **F** are resistant to penicillin.

.....

.....

.....

..... [2]

(c) (i) Explain how bacteria become resistant to antibiotics **and** how humans can reduce the problem of antibiotic resistance. **(extended only)**

..[6]

(ii) Explain why viral infections cannot be treated with antibiotics.

..... [1]

..[1]