

**Q1.** Name **two** drugs which may harm the human body.

1. ....

2. ....

(Total 2 marks)

**Q2.** (a) We control many conditions inside our bodies.

Name **three** conditions which are controlled inside our bodies.

1. ....

2. ....

3. ....

(3)

(b) Hormones are used to control fertility in women.

Use words from the box to complete the sentences.

<b>antibiotic</b>	<b>contraceptive drug</b>	<b>fertility drug</b>	<b>vaccine</b>
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A woman can prevent pregnancy by taking a .....

A woman can be helped to become pregnant by taking a .....

(2)

(c) Some drugs are addictive.

(i) Name **one** addictive drug.

.....

(1)

(ii) Explain why it is very difficult to give up using an addictive drug.

.....

.....

.....

.....

(2)

(Total 8 marks)

**Q3.** Caffeine is a *recreational* drug found in drinks such as coffee and cola.

(a) What is meant by a *recreational drug*?

.....  
.....

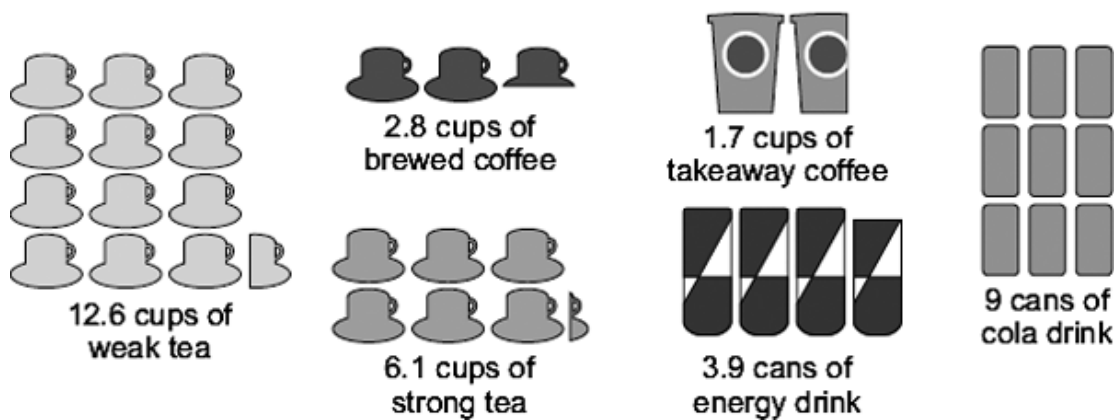
(1)

(b) Scientists investigated the effect on the brain of drinking large amounts of caffeine.

They chose students whose drinks contained caffeine equal to at least seven cups of instant coffee each day.

The diagram compares the amount of caffeine in different drinks.

Seven cups of instant coffee a day equals:



(i) Seven cups of instant coffee contain 315 mg of caffeine.

How much caffeine is there in **one** cup of instant coffee?

.....

Amount of caffeine ..... mg

(1)

(ii) Which drink in the diagram contains the highest amount of caffeine?

Tick (✓) **one** box.

A cup of weak tea

☐

A cup of takeaway coffee

☐

A can of cola

☐

(1)

- (c) Caffeine may cause hallucinations.

One example of a hallucination is hearing voices that are not there.

The scientists found that students who drank more than seven cups of instant coffee per day were three times more likely to have hallucinations than students who drank one cup or less.

Which is the best conclusion?

Tick (✓) **one** box.

Drinking caffeine causes hallucinations.

☐

It is dangerous to drink caffeine.

☐

There is a link between drinking caffeine and hallucinations.

☐

(1)  
(Total 4 marks)

**Q4.** Obesity is linked to several diseases.

- (a) Name **two** diseases linked to obesity.

1 .....

2 .....

(2)

- (b) Scientists trialled a new slimming drug.

The table shows their results after one year.

Percentage change in mass of each volunteer	Number of volunteers
gained mass or lost 0 to 3.9 %	1900
lost 4.0 to 4.9 %	1100
lost 5.0 to 9.9 %	1500
lost 10 % or more	1500

- (i) Calculate the proportion of the volunteers who lost 10 % or more of their mass.

You should first calculate the total number of volunteers, then work out the proportion.

.....

.....

Proportion of volunteers = .....

(2)

- (ii) The National Health Service (NHS) gave permission for the drug to be used.

Use information from the table to suggest a reason why the NHS gave permission for the drug to be used.

.....

.....

(1)

(Total 5 marks)

**Q5.** Thalidomide is a drug that was developed in the 1950s.

In the 1950s some pregnant women took thalidomide to prevent morning sickness during pregnancy.

Today, thalidomide is **not** used to prevent morning sickness.

- (a) (i) Give **one** medical use of thalidomide, today.

.....

.....

(1)

(ii) Today, before a woman is given thalidomide, she is

- checked to see if she is pregnant
- told to use two different methods of contraception at the same time.

Give the reason why:

the woman is checked to see if she is pregnant

.....  
.....

the woman is told to use two different methods of contraception at the same time

.....  
.....

(2)

(b) The information is about two types of contraceptive pill used by women.

**Combined pill**

- contains two hormones
- is taken for 21 days, then no pills are taken for 7 days
- > 99 % effective at preventing pregnancy
- increases chance of headaches
- increases chance of breast cancer
- decreases chance of cancer of the ovary

**Mini-pill**

- contains one hormone
- must be taken at the same time every day
- < 99 % effective at preventing pregnancy
- increases chance of breast cancer

(i) Which **two** hormones does the combined pill contain?

Draw a ring around **two** answers.

**LH**                      **oestrogen**                      **progesterone**                      **FSH**

(2)

(ii) Give **two** advantages of taking the combined pill and **not** the mini-pill.

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

(2)

- (iii) Give **one** advantage of taking the mini-pill and **not** the combined pill.

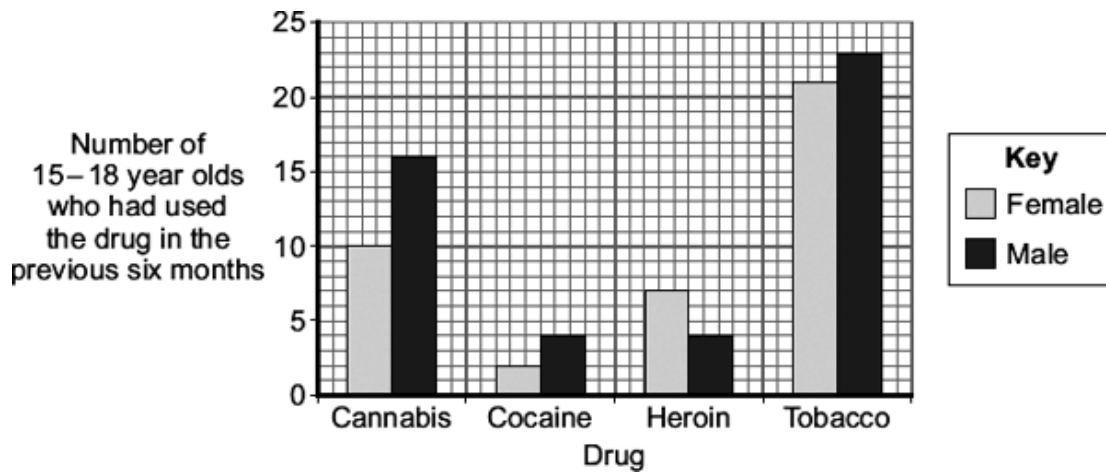
.....  
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(1)  
 (Total 8 marks)

**Q6.** Scientists did a survey of drug use by people aged 15 to 18.

The scientists asked 50 females and 50 males to fill in questionnaires about drugs they had used in the previous six months.

The chart shows the results of the survey.



- (a) (i) How many of the 15 – 18 year-olds had used cocaine in the previous six months?

.....

(1)

- (ii) What proportion of the 15 – 18 year old females had used cannabis in the previous six months?

.....

(1)

- (b) The pattern of drug use by females and males for one drug was different from the pattern for the other three drugs.

For which drug was this pattern different from the other three drugs?

.....

(1)

- (c) The data in the chart might be unreliable.

Suggest **one** reason why.

.....  
.....

(1)

- (d) 15 – 18 year olds are advised not to smoke cannabis.

Give **one** reason why.

.....  
.....

(1)

(Total 5 marks)

**Q7.** Nicotine is a drug in tobacco smoke. Smoking tobacco is harmful.

- (a) (i) Many smokers find it difficult to stop smoking.

Complete the sentence.

It is difficult to stop smoking because nicotine is very .....

(1)

- (ii) Nicotine affects synapses in the brain.

What is a synapse?

.....  
.....

(1)

- (b) A drug company has developed a new drug, Drug A, to help people stop smoking.

Doctors tested the drug in a double-blind trial with over 2000 volunteers who were smokers.

The volunteers wanted to stop smoking.

The volunteers were divided into three groups. Each volunteer took a tablet once a day for 12 weeks:

- group 1 took Drug A
- group 2 took Drug B (a drug already in use to stop people smoking)
- group 3 took a placebo.

The smoking habits of each group were recorded for a year.

- (i) What is a placebo?

.....

(1)

- (ii) Why is a placebo group used in drug trials?

.....

.....

(1)

- (iii) Which people knew what was in each tablet, in this trial?

Tick (✓) **one** box.

Both doctors and volunteers

☐

Doctors but not volunteers

☐

Neither doctors nor volunteers

☐

(1)

- (iv) It is important that the three groups of volunteers should be similar.

Give **two** factors that should be similar in the groups of volunteers.

1 .....

2 .....

(2)



- (c) The table shows the results of the trials.

Tablet	Percentage of volunteers who had stopped smoking	
	After 12 weeks	After 1 year
Drug A	44	23
Drug B	30	15
Placebo	18	10

A doctor looked at the results of the tests.

The doctor suggested that a smoker who wanted to give up smoking should use Drug A.

Why?

.....

.....

(1)  
(Total 8 marks)

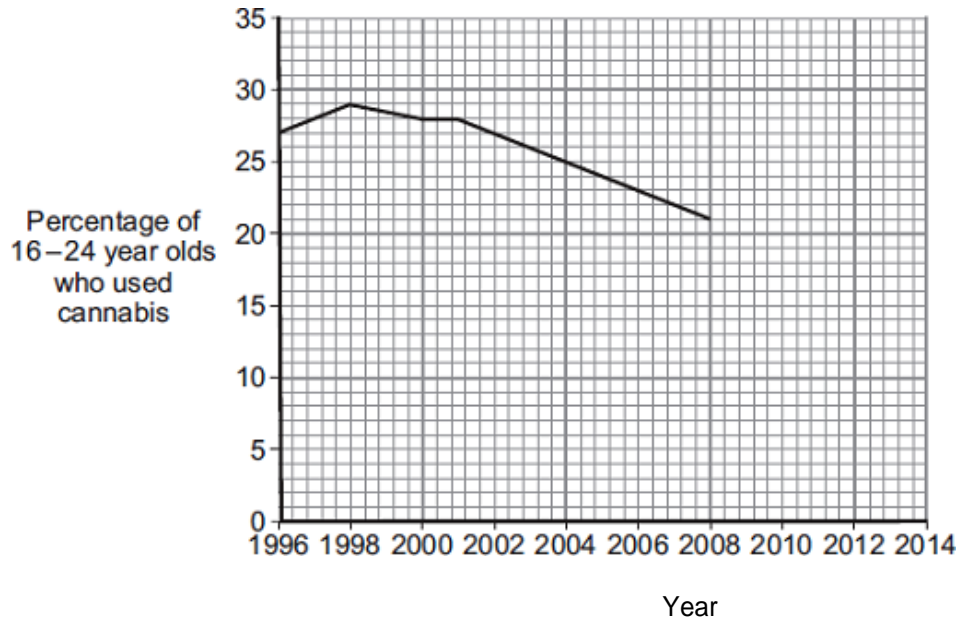
**Q8.** Cannabis is an illegal drug.

- (a) What type of illness might be caused by smoking cannabis regularly?

.....

(1)

- (b) The graph shows the use of cannabis by 16–24 year olds in the UK between 1996 and 2008.



- (i) Use the graph to predict the percentage of 16–24 year olds who will use cannabis in 2014.

Show your working **on the graph**.

Percentage = .....

(2)

- (ii) Illegal drugs are classified as Class A, Class B or Class C.  
Class C drugs are the least dangerous.

In 2004, the government changed the classification of cannabis from Class B to Class C.

In 2009, the government changed the classification of cannabis back from Class C to Class B.

Do you think that changing the classification of cannabis back to a Class B drug will reduce the percentage of 16–24 year olds who use cannabis?

Use evidence from the graph to explain your answer.

.....

.....

.....

.....

.....

.....

(2)

(Total 5 marks)

**Q9.** The photograph shows an athlete at the start of a race.



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- (a) The athlete's sense organs contain special cells.  
These special cells detect changes in the environment.

(i) **List A** shows changes in the environment.

**List B** shows some of the athlete's sense organs.

Draw **one** line from each change in the environment in **List A** to the sense organ detecting the change in **List B**.

List A Change in the environment	List B Sense organ
	Ear
Sight of the finishing line	Nose
Sound of the starting gun	Eye
Pressure of the ground on the fingers	Skin

(3)

(ii) Which cells detect changes in the environment?

Tick (✓) **one** box.

Gland cells

☐

Muscle cells

☐

Receptor cells

☐

(1)

(b) During the race, the concentration of sugar in the athlete's blood decreases.

Why?

.....

.....

(1)

(c) Some athletes use anabolic steroids to improve performance.

(i) Draw a ring around the correct answer to complete the sentence.

Anabolic steroids increase

breathing rate.

growth of muscles.

heart rate.

(1)

(ii) Sporting regulations ban the use of anabolic steroids.

Suggest **one** reason why.

.....

.....

(1)

(Total 7 marks)

