Health issues

② Quick quiz

Tick the correct box to show whether each disease is communicable or non-communicable.

Disease	Lung cancer	Measles	Cardiovascular disease	HIV	Flu
Non-communicable					
Communicable					

⑩ Communicable and non-communicable diseases   Grade 2

1. Give the correct term for a state of physical and mental well-being. .... **[1 mark]**

2. Name **two** factors that can cause non-communicable disease. **[2 marks]**

   1 diet ....

   2 ....

> Non-communicable diseases are usually caused by lifestyle factors.
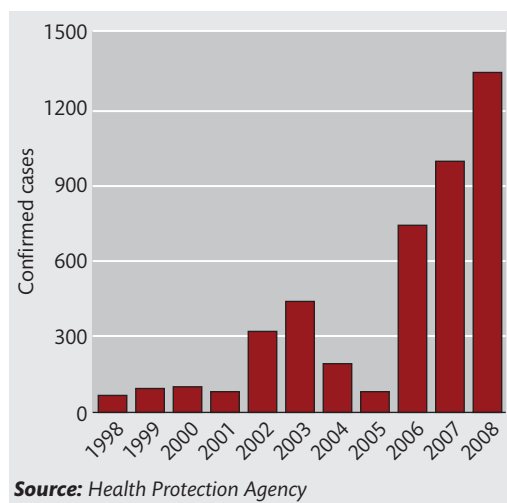
3. Which of these is a pathogen? Tick **one** box. **[1 mark]**

   bacteria ☐   chloroplasts ☐   flagella ☐

⑩ Measles   Grades 4–5

4. Figure 1 shows the number of cases of measles in England and Wales between 1998 and 2008.

Exam focus
You will be expected to interpret data from graphs. Read the axis labels carefully to find out what the data are showing.

(a) Which conclusions can be drawn from the data shown? Tick **two** boxes. **[2 marks]**

The number of cases of measles has decreased. ☐

The number of cases of measles is highest in 2008. ☐

The lowest number of cases of measles is in 2000. ☐

There were over 300 cases of measles in 2004. ☐

There is a large decrease in the number of cases of measles between 2003 and 2005. ☐

Source: Health Protection Agency

Figure 1

(b) In 1998, a doctor claimed that the vaccine for measles caused autism. This claim has now been shown to be false. Use this information to suggest reasons for the trend in the data shown in **Figure 1**. **[3 marks]**

....

....

....

> Vaccines give immunity to some infectious diseases, for example, measles.

> Autism is a disorder where people can struggle with social interactions.

☑ **Made a start**   ☑ **Feeling confident**   ☑ **Exam ready**   21

Coronary heart disease

② Quick quiz

Circle the correct words in bold to complete the sentences about cardiovascular disease.

Cardiovascular disease involves the **bladder / lungs / heart**.

Coronary arteries supply the heart with **carbon dioxide / oxygen / urea**.

Statins / stents / valves prevent the blood from flowing backwards.

⑩ Heart disease   Grades 3–5

1. Complete **Table 1** to show the effects of different diseases of the heart.   **[3 marks]**

Table 1

Type of heart disease	Effects
blocked coronary artery	
.... valves	harder for the heart to pump blood around the body
heart failure	the heart is unable to efficiently pump blood around the body

2. Describe how heart attacks are caused.   **[4 marks]**

There is a build-up of fat in the ....

This causes them to become ....

The heart muscle does not get any ....

So the heart stops ....

⑩ Cardiovascular disease   Grades 2–5

3. Name **two** ways that blocked coronary arteries can be treated.   **[2 marks]**

1 .... 2 ....

4. Evaluate the advantages **and** disadvantages of getting a heart transplant.   **[4 marks]**

....

....

....

....

> Think about the risks of surgery as well as the person's quality of life after surgery if the surgery is successful.

Exam focus

You will be expected to evaluate different treatments for cardiovascular disease and discuss the benefits and risks of each treatment.

For this question, you need to give the benefits and risks of having a heart transplant so make sure you give points from both sides. There are four marks available so make sure you make at least four separate points – ideally, two advantages and two disadvantages.

☑ **Made a start**   ☑ **Feeling confident**   ☑ **Exam ready**

Effects of lifestyle

(2) Quick quiz

Name **three** lifestyle factors that can lead to poor health.

1 …………………………….. 2 …………………………….. 3 …………………………….

(10) Obesity and type 2 diabetes — Grades 3–5

1. Figure 1 shows the risk of developing type 2 diabetes of people with different BMIs.

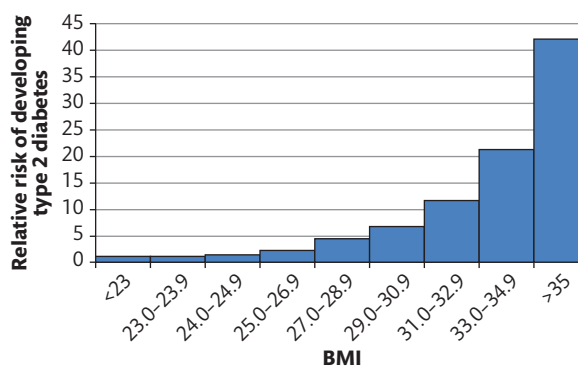**(a)** Describe what BMI is. **[2 marks]**

🚩 BMI stands for .... It is a measure of obesity.

(b) What conclusions can be drawn from the data shown in **Figure 1**? Tick **two** boxes. **[2 marks]**

As BMI increases the risk of developing type 2 diabetes increases. ☐

People with a BMI of <23 are most at risk of type 2 diabetes. ☐

The data prove that high BMI causes type 2 diabetes. ☐

🚩 The data show there is a correlation between high BMI and type 2 diabetes. ☑

Figure 1

(c) Suggest why the government promotes initiatives for people to adopt healthier lifestyles. **[3 marks]**

🚩 If people are healthier they are less likely to develop ....

So they will not need to use ....

This means it will cost the ....

> A lot of money is spent by the government on the NHS for treatment of diseases. Many non-communicable diseases can be avoided with lifestyle changes.

(10) Risk factors for non-communicable diseases — Grades 2–4

2. The table below shows some profiles of patients.

Patient A	Patient B	Patient C	Patient D
heavy drinker	smokes 20 cigarettes a day	smokes 5 cigarettes a day	heavy drinker
sedentary job	has a normal BMI	has a normal BMI	has an active lifestyle
has a high fat diet	has an office job	has an active lifestyle	has a normal BMI
is obese		has a high salt diet	has a healthy diet

(a) Which patient is most at risk of developing lung cancer? …………………………………………… **[1 mark]**

(b) Which patient is most at risk of developing type 2 diabetes? …………………………………… **[1 mark]**

3. Explain why a pregnant woman should not drink or smoke. **[2 marks]**

…………………………………………………………………………..

…………………………………………………………………………..

> Relate the risks of drinking and smoking to the health of the growing baby rather than the health of the woman.

☑ **Made a start** ☑ **Feeling confident** ☑ **Exam ready** **23**

Cancer

⏱ 3 Quick quiz

Are these statements about cancer true or false?

All cancers are inherited.	**True / False**
Benign tumours spread around the body through the blood supply.	**True / False**
Carcinogens are cancer-causing substances.	**True / False**
Lung cancer is a communicable disease.	**True / False**

⏱ 5 Lifestyle risk factors **Grades 2–3**

1. Carcinogens are substances that are risk factors for some cancers.

Name **two** substances that are carcinogens. **[2 marks]**

🚩 **1** radon .... **2** ....

⏱ 5 Tumours **Grade 3**

2. Table 1 shows some features of malignant and benign tumours.

Complete the table by ticking the boxes to show the correct features of each type of tumour. **[4 marks]**

Table 1

Feature	Type of tumour	
	Benign	**Malignant**
are growths of abnormal cells	✓	✓
are cancerous		
grow slowly		
produce secondary tumours		

Exam focus
You need to be able to describe the differences between benign and malignant tumours.

Malignant tumours are much more harmful than benign tumours.

⏱ 10 Genetic risk factors **Grades 4–5**

3. Women with a mutation on the BRCA gene are more likely to develop breast cancer. **Figure 1** shows the difference in risk.

(a) Calculate the difference in risk of someone with the BRCA gene mutation and someone without the gene developing breast cancer. **[1 mark]**
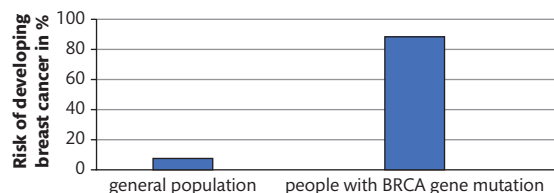
....

Figure 1

Exam focus
You are expected to be able to translate information between graphical and numerical forms.

Exam focus
When asked to do a calculation from a graph make sure you read from the graph carefully.

(b) Suggest **two** reasons why people may want to get tested for the BRCA gene if they have a family history of breast cancer. **[3 marks]**

....

....

You inherit genes from your parents. Early detection of breast cancer means it can be treated more successfully.

Exam focus
The command word 'suggest' means that you might not know the correct answer but you will be expected to apply your knowledge from other parts of the syllabus and the information given in the question.

☑ **Made a start**	☑ **Feeling confident**	☑ **Exam ready**

Communicable diseases

② Quick quiz

Are these statements about infections true or false?

Communicable diseases are sometimes called infectious diseases.	**True / False**
Pathogens are plants that cause infectious diseases.	**True / False**
Communicable disease can be spread by touch.	**True / False**
Antibiotics kill viruses.	**True / False**

⑤ Pathogens — Grade 4

1. (a) Bacteria and viruses are two types of pathogen. Describe how viruses cause disease. **[2 marks]**

🚩 *Viruses enter cells and* ....

The cells are damaged when they ....

⑮ Spread of communicable disease — Grades 4–5

2. Communicable diseases can be spread by direct contact or indirect contact. Complete **Table 1** by ticking the boxes to show if each type of contact is direct or indirect. **[3 marks]**

Infectious diseases are spread from organism to organism. If they are spread by going through air, water or food then they are not spread directly from organism to organism.

Table 1

	Direct contact	Indirect contact
drinking contaminated water		
touching a diseased animal		
breathing in pathogens in air droplets		

3. Influenza is a common infectious viral disease that can be spread through the air and by touch.
What are **two** ways that the spread of influenza can be stopped? Tick **two** boxes. **[2 marks]**

cooking food thoroughly ☐   sterilising water ☐

using surgical masks ☐   using antibiotics ☐

washing hands ☐

Think about what type of pathogens antibiotics kill.

4. Figure 1 shows some doctors performing surgery.
Describe **three** precautions they have taken to prevent the spread of disease to the patient. **[3 marks]**

....

....

....

Figure 1

Think about ways that communicable diseases can be spread. What equipment is being used that will prevent airborne pathogens and pathogens that are passed by touch?

Exam focus
If the question refers to a diagram or a photograph, use the information in the image to help you answer the question.

☑ **Made a start**   ☑ **Feeling confident**   ☑ **Exam ready**

Viral diseases

② Quick quiz

Circle the correct words in bold.

Measles is a viral disease that affects **humans / plants / bacteria**.

HIV can lead to **AIDS / measles / immunity**.

People with HIV can take **antibiotics / antiviral drugs**.

⑤ Measles   Grades 2–3

1. (a) Table 1 shows some ways that measles is spread and some symptoms of measles. Complete the table by ticking the boxes.   **[3 marks]**

Table 1

	Way measles is spread	Symptom
fever		✓
droplets in coughs and sneezes		
red skin rash		

> Symptoms are the visible signs of a disease.

(b) Give a reason why most children are immune to measles.   **[1 mark]**

At a young age, children are given ....

.... which provides immunity to measles.

> Think about the ways the spread of infectious diseases can be prevented. How can we prevent lots of people getting a disease at once?

⑤ HIV   Grades 2–5

2. (a) Name the body system that HIV infects. ....   **[1 mark]**

(b) How is HIV spread? Tick **two** boxes.   **[2 marks]**

droplets in the air ☐   sexual contact ☐

physical contact ☐   sharing contaminated needles ☐

through uncooked food ☐

(c) Explain how HIV can lead to a person's death.   **[2 marks]**

....

....

> Think about the other diseases that HIV can lead to and which body system HIV affects.

⑤ TMV   Grades 3–5

3. (a) Give the full name of TMV. ....   **[1 mark]**

(b) TMV causes discolouration of leaves. Suggest how this affects the organism's ability to produce food.   **[2 marks]**

....

....

> Think about what the main function of leaves is.

☐ **Made a start**   ☐ **Feeling confident**   ☐ **Exam ready**