

# STUDENT TEST BOOKLET

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## READING SECTION (40 questions)

### READING PASSAGE 1

You should spend about 20 minutes on **Questions 1-13**, which are based on Reading Passage 1 below.

#### The History of Vaccination

The concept of intentionally exposing individuals to a less severe form of a disease to build immunity has roots stretching back centuries. As early as the 15th century, and possibly even earlier, a practice known as variolation was employed in various parts of the world to combat smallpox. This method involved inoculating healthy individuals with material from smallpox sores, a risky procedure that nonetheless represented one of the earliest attempts at immunization. A significant milestone in the history of vaccination occurred in 1721 when Lady Mary Wortley Montagu, having observed the practice in the Ottoman Empire, introduced smallpox inoculation to Europe. This set the stage for one of the most pivotal breakthroughs in medical history.

In 1796, English physician Edward Jenner revolutionized the field with his pioneering work. Building on the observation that milkmaids who contracted cowpox, a milder disease, seemed to be immune to smallpox, Jenner conducted a groundbreaking experiment. He inoculated an eight-year-old boy, James Phipps, with material from a cowpox sore. After a brief period of mild illness, Phipps made a full recovery. Two months later, Jenner exposed Phipps to smallpox, and the boy remained healthy, demonstrating the efficacy of the vaccination. The term “vaccine” itself is derived from “vacca,” the Latin word for cow, a testament to the origins of this life-saving innovation.

The 19th century witnessed further advancements, most notably through the work of Louis Pasteur. In 1885, Pasteur developed a vaccine for rabies, a fatal disease. His method involved a series of injections with progressively stronger doses of the rabies virus, a controversial but ultimately successful approach. This period also saw the development of antitoxins for diseases like diphtheria, thanks to the work of scientists like Dr. Anna Wessels Williams.

The 20th century ushered in an era of rapid vaccine development. The devastating Spanish Flu pandemic of 1918-1919 spurred research into an influenza vaccine. The mid-20th century saw the development of the polio vaccine by Jonas Salk, followed by an oral polio vaccine developed by Albert Sabin. These vaccines were instrumental in the near-eradication of polio. The latter half of the century saw the introduction of combination vaccines like the MMR (measles, mumps, and rubella) vaccine, and the establishment of global immunization programs like the World Health Organization's (WHO) Expanded Programme on Immunization (EPI).

The culmination of these global efforts was the eradication of smallpox, declared by the WHO in 1980. This monumental achievement stands as a testament to the power of vaccination. The late 20th and early 21st centuries have seen the development of vaccines for a wide range of diseases, including hepatitis B, Haemophilus influenzae type b (Hib), human papillomavirus (HPV), and rotavirus. The recent COVID-19 pandemic witnessed the unprecedentedly rapid development and deployment of new vaccine technologies, including mRNA vaccines.

Despite these remarkable successes, challenges remain. Vaccine hesitancy, fueled by misinformation, poses a significant threat to public health. Ensuring equitable access to vaccines for all populations, particularly in low-income countries, is another critical challenge. The history of vaccination is a story of scientific ingenuity, perseverance, and global collaboration, a story that continues to unfold as we confront new and existing infectious diseases.

### Questions 1-6

Do the following statements agree with the information given in Reading Passage 1? In boxes 1-6 on your answer sheet, write

**TRUE** if the statement agrees with the information **FALSE** if the statement contradicts the information **NOT GIVEN** if there is no information on this

1. Variolation was a completely safe method of preventing smallpox.
2. Lady Mary Wortley Montagu was the first person to use vaccination.
3. Edward Jenner's vaccine used a weakened form of the smallpox virus.
4. Louis Pasteur's rabies vaccine was immediately accepted by the medical community.

5. The Spanish Flu pandemic was the sole motivation for developing an influenza vaccine.
6. The MMR vaccine protects against three different diseases.

### Questions 7-10

Choose the correct letter, **A**, **B**, **C** or **D**.

Write the correct letter in boxes 7-10 on your answer sheet.

1. The word “vaccine” comes from a word meaning: A. a type of disease B. a type of animal C. a type of plant D. a type of person
2. The development of the polio vaccine is attributed to: A. Louis Pasteur B. Edward Jenner C. Jonas Salk D. Anna Wessels Williams
3. The Expanded Programme on Immunization (EPI) was established by: A. The World Bank B. The United Nations C. The World Health Organization D. The Red Cross
4. A major challenge to vaccination programs mentioned in the passage is: A. The high cost of vaccines B. The difficulty of storing vaccines C. The spread of misinformation D. The lack of trained medical personnel

### Questions 11-13

Complete the summary below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

Write your answers in boxes 11-13 on your answer sheet.

The history of vaccination is a long one, with early practices like **11** \_\_\_\_\_ being used to combat smallpox. A major breakthrough came with Edward Jenner’s use of cowpox to create immunity to smallpox. The 20th century saw rapid progress, with the development of vaccines for diseases like polio and the creation of **12** \_\_\_\_\_ vaccines like MMR. The global eradication of smallpox is a testament to the success of vaccination. However, challenges such as vaccine hesitancy and ensuring **13** \_\_\_\_\_ access remain.

## READING PASSAGE 2

You should spend about 20 minutes on **Questions 14-26**, which are based on Reading Passage 2 below.

### How Vaccines Work: A Symphony of the Immune System

- A.** Vaccines are one of the most remarkable achievements of modern medicine, a testament to our growing understanding of the intricate workings of the human immune system. At its core, a vaccine works by safely introducing a component of a pathogen, or a weakened or inactivated form of the pathogen itself, to the body. This “training exercise” allows the immune system to develop a defense against the real pathogen without having to experience the full-blown illness.
- B.** The key players in this defense are white blood cells, the soldiers of the immune system. When a vaccine is administered, it triggers an immune response. Specialized white blood cells called B-lymphocytes produce antibodies, which are proteins that are custom-designed to recognize and bind to specific antigens – the foreign substances on the surface of the pathogen. These antibodies act like tags, marking the invaders for destruction by other immune cells.
- C.** But the immune system’s response doesn’t stop there. Another type of white blood cell, the T-lymphocyte, is also activated. There are two main types of T-lymphocytes involved in this process: helper T-cells and killer T-cells. Helper T-cells orchestrate the immune response, stimulating B-lymphocytes to produce antibodies and activating killer T-cells. Killer T-cells, as their name suggests, directly attack and destroy infected cells, preventing the pathogen from replicating and spreading.
- D.** The true genius of vaccination lies in the creation of immunological memory. After the initial “infection” from the vaccine has been cleared, a small number of memory B-lymphocytes and memory T-lymphocytes remain in the body. These long-lived cells “remember” the specific antigen they encountered. If the body is later exposed to the actual pathogen, these memory cells can quickly mount a robust and targeted immune response, producing a flood of antibodies and activating a large number of killer T-cells to neutralize the threat before it can cause disease.
- E.** There are several different types of vaccines, each with its own mechanism of action. Live-attenuated vaccines, such as the MMR vaccine, contain a weakened form of the live virus. These vaccines produce a very strong and long-lasting immune response that is similar to that of a natural infection. Inactivated vaccines, such as the seasonal flu shot, contain a killed version of the pathogen. These vaccines are

generally safer for people with weakened immune systems but may require multiple doses or booster shots to maintain immunity.

F. Other types of vaccines include subunit, recombinant, polysaccharide, and conjugate vaccines, which use only specific pieces of the pathogen, such as its protein, sugar, or capsid (a casing around the germ). Toxoid vaccines, like the tetanus shot, contain a toxin made by the germ that has been made harmless. More recently, mRNA vaccines, like some of the COVID-19 vaccines, have been developed. These vaccines use a new approach that teaches our cells how to make a protein—or even just a piece of a protein—that triggers an immune response inside our bodies.

### **Questions 14-19**

Reading Passage 2 has six paragraphs, **A-F**.

Choose the correct heading for each paragraph from the list of headings below.

Write the correct number, **i-viii**, in boxes 14-19 on your answer sheet.

### **List of Headings**

- i. The role of T-lymphocytes in the immune response
- ii. The importance of booster shots
- iii. The basic principle of vaccination
- iv. The creation of long-term immunity
- v. Different categories of vaccines
- vi. The function of antibodies
- vii. The future of vaccine technology
- viii. A new era of vaccine development

- 1. Paragraph A
- 2. Paragraph B
- 3. Paragraph C
- 4. Paragraph D
- 5. Paragraph E
- 6. Paragraph F

### **Questions 20-23**

Choose the correct letter, **A, B, C or D**.

Write the correct letter in boxes 20-23 on your answer sheet.

1. The primary purpose of a vaccine is to: A. Cure a disease B. Prevent a disease C. Treat the symptoms of a disease D. Weaken the immune system
2. What is the role of B-lymphocytes? A. To directly attack infected cells B. To produce antibodies C. To orchestrate the immune response D. To remember the pathogen
3. What is the main advantage of live-attenuated vaccines? A. They are safe for everyone. B. They provide a strong, long-lasting immune response. C. They do not require any booster shots. D. They are easy to manufacture.
4. What is a key feature of immunological memory? A. It is a short-term response. B. It involves only B-lymphocytes. C. It allows for a rapid response to future infections. D. It is only created by natural infections.

### **Questions 24-26**

Complete the sentences below.

Choose **NO MORE THAN THREE WORDS** from the passage for each answer.

Write your answers in boxes 24-26 on your answer sheet.

1. Helper T-cells are responsible for \_\_\_\_\_ the immune response.
2. Inactivated vaccines may require multiple doses or \_\_\_\_\_ to maintain immunity.
3. mRNA vaccines teach our cells how to make a protein that \_\_\_\_\_ an immune response.

### **READING PASSAGE 3**

You should spend about 20 minutes on **Questions 27-40**, which are based on Reading Passage 3 below.

#### **The Future of Vaccination: Overcoming Challenges and Embracing Innovation**

Vaccination stands as a cornerstone of public health, a testament to human ingenuity in the face of infectious diseases. The eradication of smallpox and the near-elimination of polio are monumental achievements that underscore the transformative power of vaccines. However, the journey of vaccination is far from over. The 21st century presents a new set of challenges and opportunities, demanding innovative approaches to vaccine development and global immunization strategies.

One of the most significant hurdles in the modern era is the rise of vaccine hesitancy. Fueled by misinformation and disinformation spread through social media and other channels, a growing number of individuals are questioning the safety and efficacy of vaccines. This has led to a resurgence of preventable diseases like measles in some parts of the world. Addressing vaccine hesitancy requires a multi-pronged approach, including transparent communication from public health officials, community engagement, and education to build trust and counter false narratives.

Another major challenge is the threat of emerging infectious diseases. The COVID-19 pandemic served as a stark reminder of the speed at which new pathogens can emerge and spread globally. The rapid development of COVID-19 vaccines was a remarkable scientific achievement, but it also highlighted the need for a more proactive and prepared approach to future pandemics. This includes investing in research and development for “platform technologies” that can be quickly adapted to create vaccines for new pathogens, as well as strengthening global surveillance systems to detect and respond to outbreaks early.

Furthermore, there are still many diseases for which we do not have effective vaccines. These “difficult” pathogens, such as HIV, malaria, and tuberculosis, present complex scientific challenges. They have evolved sophisticated mechanisms to evade the human immune system, making it difficult to design vaccines that can induce a protective and long-lasting immune response. Overcoming these challenges will require a deeper understanding of the immunology of these diseases and the development of novel vaccine technologies.

The future of vaccination will also be shaped by advancements in our understanding of the human immune system. The field of “systems vaccinology” aims to take a holistic view of the immune response to vaccination, using advanced technologies to analyze the complex interplay of genes, proteins, and cells. This approach could lead to the development of more personalized vaccines, tailored to an individual’s age, genetics, and health status. For example, we may be able to develop more effective vaccines for the elderly, whose immune systems tend to weaken with age.

Moreover, new vaccine delivery systems are being explored. Needle-free methods, such as microneedle patches or oral vaccines, could make vaccination less painful and easier to administer, particularly in resource-limited settings. These innovations could help to improve vaccine coverage and reach populations that are currently underserved.

In conclusion, while the successes of vaccination are undeniable, the path forward requires a concerted effort to address the challenges of vaccine hesitancy, emerging diseases, and difficult pathogens. By embracing innovation in vaccine technology, strengthening global collaboration, and building public trust, we can continue to harness the power of vaccination to protect and improve the health of people worldwide.

### Questions 27-32

Do the following statements agree with the information given in Reading Passage 3? In boxes 27-32 on your answer sheet, write

**YES** if the statement agrees with the claims of the writer **NO** if the statement contradicts the claims of the writer **NOT GIVEN** if it is impossible to say what the writer thinks about this

1. The author believes that the work of vaccination is complete.
2. Social media is the only cause of vaccine hesitancy.
3. The COVID-19 pandemic has shown the need for a more prepared approach to future pandemics.
4. We currently have effective vaccines for all major infectious diseases.
5. Systems vaccinology could lead to more personalized vaccines.
6. Needle-free vaccine delivery systems are already widely used.

### Questions 33-36

Choose the correct letter, **A**, **B**, **C** or **D**.

Write the correct letter in boxes 33-36 on your answer sheet.

1. What is a major factor contributing to vaccine hesitancy? A. The high cost of vaccines B. The pain of injections C. The spread of misinformation D. The lack of available vaccines
2. What are “platform technologies” designed to do? A. To create vaccines for existing diseases B. To be quickly adapted for new pathogens C. To reduce the cost of vaccines D. To track the spread of diseases
3. Why are some pathogens considered “difficult” to create vaccines for? A. They are not very common. B. They do not cause serious illness. C. They can evade the

human immune system. D. They are only found in remote areas.

4. What is a potential benefit of microneedle patches? A. They are more effective than traditional vaccines. B. They can be self-administered. C. They are less painful and easier to administer. D. They provide lifelong immunity.

### **Questions 37-40**

Complete the notes below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

Write your answers in boxes 37-40 on your answer sheet.

### **The Future of Vaccination**

- **Challenges:**
  - Vaccine hesitancy, fueled by **37** \_\_\_\_\_.
  - Threat of emerging infectious diseases.
  - “Difficult” pathogens that can evade the **38** \_\_\_\_\_.
- **Innovations:**
  - “Platform technologies” for rapid vaccine development.
  - “Systems vaccinology” for more **39** \_\_\_\_\_ vaccines.
  - New delivery systems, such as **40** \_\_\_\_\_ patches.

### **LISTENING SECTION (40 questions)**

#### **SECTION 1 Questions 1-10**

Complete the form below.

Write **NO MORE THAN TWO WORDS AND/OR A NUMBER** for each answer.

#### **Travel Vaccination Booking Form**

<b>Patient Details</b>	
Name:	Sarah <b>1</b> _____
Contact Number:	<b>2</b> _____
Date of Birth:	15th April 1995
<b>Travel Details</b>	
Destination:	<b>3</b> _____
Departure Date:	<b>4</b> _____
Duration of Trip:	3 weeks
<b>Vaccination Required</b>	
	Typhoid
	Hepatitis A
	<b>5</b> _____
<b>Appointment Details</b>	
Doctor's Name:	Dr. Evans
Appointment Date:	<b>6</b> _____
Appointment Time:	<b>7</b> _____
Clinic Location:	Newtown Medical Centre
Address:	17 <b>8</b> _____ Street
<b>Additional Notes</b>	
Patient needs to bring:	Passport and <b>9</b> _____
Cost of consultation:	<b>10</b> £_____

## SECTION 2 Questions 11-20

### Questions 11-15

Choose the correct letter, **A**, **B**, or **C**.

1. The primary goal of the “Community Shield” program is to A. treat people who are already sick. B. increase vaccination rates for the seasonal flu. C. provide general health check-ups.
2. The information session will be held at the A. Town Hall. B. Community Library. C. Northwood Park.
3. Who is the main target audience for this year’s flu vaccine campaign? A. Children B. The elderly C. All community members
4. What is a new feature of the program this year? A. A mobile vaccination clinic B. Free transportation C. Online appointment booking
5. The speaker suggests that getting vaccinated is important to protect A. only yourself. B. your family and friends. C. the entire community.

### **Questions 16-20**

What information is given about each of the following locations?

Choose **FIVE** answers from the box and write the correct letter, **A-G**, next to Questions 16-20.

#### **Locations**

1. Town Hall
2. Central Shopping Centre
3. Eastside Clinic
4. Northwood Park
5. Community Library

#### **Information**

- A. Open on weekends only B. Requires an appointment C. Main information point D. Open for the longest hours E. Best for people with mobility issues F. Will have extra staff available G. Only for children’s vaccinations

### **SECTION 3 Questions 21-30**

Choose the correct letter, **A**, **B**, or **C**.

1. What is the main topic of Chloe and Liam's presentation? A. The history of vaccine discovery B. The challenges in modern vaccine development C. The global distribution of vaccines
2. Liam was surprised to learn that A. developing a new vaccine can take a very long time. B. the first stage of testing involves a small number of people. C. some viruses change very quickly.
3. According to Chloe, why is creating a vaccine for a virus like HIV so difficult? A. The virus is not well understood. B. The virus mutates rapidly. C. There is not enough funding for research.
4. What point does Liam make about the clinical trial process? A. It is too expensive. B. It is not always safe. C. It is a very long and complex process.
5. Chloe mentions that a major hurdle for new vaccines is A. manufacturing on a large scale. B. getting approval from regulators. C. finding enough volunteers for trials.
6. What do they agree is a critical factor for the success of a new vaccine? A. The cost of the vaccine B. Public trust and acceptance C. The speed of development
7. Liam suggests that future vaccines might be A. delivered through a patch. B. available as a pill. C. administered only once in a lifetime.
8. Chloe is particularly interested in the development of A. vaccines for the elderly. B. universal vaccines. C. vaccines for non-human animals.
9. What aspect of their presentation do they need to work on? A. The introduction B. The visual aids C. The conclusion
10. They decide their next step is to A. do more research online. B. practice their presentation. C. create a clear summary slide.

#### **SECTION 4 Questions 31-40**

Complete the notes below.

Write **NO MORE THAN TWO WORDS** for each answer.

**Lecture: The Global Impact of Vaccination**

- **Introduction**

- Vaccination: one of the most significant public health achievements.
- Has led to the control and near-elimination of many diseases.

- **Historical Success Stories**

- Smallpox: officially **31** \_\_\_\_\_ in 1980 after a global effort.
- Polio: almost eliminated, thanks to the Global Polio Eradication **32** \_\_\_\_\_.

- **The Economic and Social Impact**

- Reduces healthcare costs by preventing illness.
- Prevents long-term disability.
- Increases **33** \_\_\_\_\_ by keeping adults healthy and in the workforce.
- Allows children to attend school, improving their future prospects.

- **Herd Immunity**

- Definition: when a large portion of a community is immune, protecting those who are not.
- Crucial for protecting **34** \_\_\_\_\_ populations (e.g., infants, people with weak immune systems).
- The required vaccination percentage varies by disease; for measles, it is very high.

- **Challenges in Global Vaccination**

- **35** \_\_\_\_\_: ensuring all countries have access to vaccines.
- Infrastructure: need for a reliable “**36** \_\_\_\_\_” to keep vaccines at the right temperature.
- Misinformation: can lead to a decline in vaccination rates and the return of preventable diseases.
- Geography: reaching people in **37** \_\_\_\_\_ areas can be difficult.

- **The Role of Global Organizations**

- WHO and UNICEF are key players.

- Gavi, the Vaccine Alliance: a **38** \_\_\_\_\_ that helps provide vaccines to low-income countries.

- **The Future of Vaccination**

- Development of new vaccines (e.g., for malaria).
  - New delivery methods, like patches, could improve **39** \_\_\_\_\_.
  - Need for continued investment and **40** \_\_\_\_\_ to address future pandemics.
- 

## **LISTENING SCRIPTS**

### **SECTION 1**

(Sound of a phone ringing)

**Receptionist:** Newtown Medical Centre, how can I help you?

**Sarah:** Hello, I'd like to book an appointment for some travel vaccinations, please.

**Receptionist:** Certainly. Can I take your name?

**Sarah:** Yes, it's Sarah Green. That's G-R-E-E-N.

**Receptionist:** Actually, I have you in our system as Sarah **(1) Williams**. Is that an old name?

**Sarah:** Oh, yes, sorry. That's my maiden name. Williams is correct.

**Receptionist:** No problem. And can I confirm your contact number?

**Sarah:** It's **(2) 07700 900 821**.

**Receptionist:** Great. And where will you be traveling to?

**Sarah:** I'm going to **(3) Southeast Asia**. A few different countries.

**Receptionist:** And when is your departure date?

**Sarah:** I fly on the **(4) 28th of February**.

**Receptionist:** Okay. So, looking at the recommendations for that region, you'll need Typhoid and Hepatitis A. It also looks like you're due for a (5) **Tetanus** booster. Is that correct?

**Sarah:** Yes, I think so. It's been a long time.

**Receptionist:** We can do all of those for you. Let me see... Dr. Evans is our travel specialist. He has an opening on... let's see... the (6) **5th of February**. Would that work for you?

**Sarah:** Yes, that's perfect.

**Receptionist:** And what time would you prefer? We have 10:30 AM or (7) **2:15 PM**.

**Sarah:** 2:15, please.

**Receptionist:** Okay, that's booked for you. So, Sarah Williams, with Dr. Evans on the 5th of February at 2:15 PM at the Newtown Medical Centre. Our address is 17 (8) **Orchard Street**.

**Sarah:** Orchard Street, got it. Is there anything I need to bring with me?

**Receptionist:** Yes, please bring your passport and your (9) **travel itinerary**, if you have it. It helps the doctor to see your exact travel plans.

**Sarah:** Okay, will do. And is there a charge for the appointment?

**Receptionist:** There is a consultation fee, which is (10) **£50**. The cost of the vaccines is separate.

**Sarah:** Okay, thank you very much.

**Receptionist:** You're welcome. We'll see you on the 5th.

## SECTION 2

**Presenter:** Good evening, everyone, and thank you for coming to this community information session. My name is David, and I'm the public health coordinator for our town. Tonight, I want to talk to you about our annual 'Community Shield' program, which is all about keeping our community healthy during the winter months. The primary goal of the program is to (11) **increase vaccination rates for the seasonal flu**. While we always encourage general wellness, this program is specifically focused on flu prevention.

This year, our main information session, which is this one, is being held here at the **(12) Town Hall**. We find it's the most central location for everyone. We have a number of other events and clinics planned across the town, which I'll detail in a moment.

In the past, we've often focused our campaigns on specific groups, like the elderly or young children. However, this year, our message is that the flu can affect anyone, so we are encouraging **(13) all community members** to get vaccinated. It's about protecting yourself and creating a 'shield' of immunity around those who are more vulnerable.

We're always looking for ways to make it easier for people to get their vaccinations. This year, we're very excited to introduce a **(14) mobile vaccination clinic**. This bus will travel to different neighborhoods, especially those with fewer transport links, making it more convenient than ever. We're also continuing our online booking system, which was very popular last year.

Finally, before I move on, I want to stress the importance of community-mindedness. Getting vaccinated isn't just about your own health. When you protect yourself, you also help protect your family, your friends, and the **(15) entire community**, especially those who can't get vaccinated for medical reasons. It's a small act that has a big impact.

Now, I'd like to give you some details about our vaccination locations over the next month. You can find all this information in the leaflet in front of you.

First, the **(16) Town Hall** will serve as our main information point. You can come here any weekday from 9 AM to 5 PM to ask questions and pick up leaflets, but please note that no vaccinations will be given here. So, this is the **© main information point**.

Next, we will have a clinic set up in the **(17) Central Shopping Centre**. This is always a popular location. To manage the numbers, this clinic will be **(B) requires an appointment**. You can book online or by phone. It will be open every day for the next two weeks.

Our **(18) Eastside Clinic** will be open from 8 AM to 8 PM on weekdays. This location will have the **(D) longest hours** to accommodate people who work late. We hope this will be convenient for many of you.

For families, we recommend visiting our clinic at **(19) Northwood Park** on the weekend. This location will have **(F) extra staff available**, including nurses who

specialize in pediatric care, to make the experience as smooth as possible for children and parents. This clinic will be open on Saturdays and Sundays from 10 AM to 4 PM.

Finally, the **(20) Community Library** will host our new mobile vaccination clinic on the first and third Mondays of the month. This location is ideal for **(E) people with mobility issues** as it is fully accessible and on a major bus route. No appointment is needed for the mobile clinic.

We hope you'll take advantage of one of these options. Thank you.

### SECTION 3

**Chloe:** So, Liam, how are you feeling about our presentation on Tuesday? I've been going over my notes.

**Liam:** I'm a bit nervous, but I think we have some good material. I was just reading about the challenges in vaccine development. It's more complex than I thought.

**Chloe:** I know. So, we're focusing on **(21) the challenges in modern vaccine development**, right? Not the history or the distribution side of things.

**Liam:** Right. I was really surprised by the timelines. I didn't realize that from the initial research to getting a vaccine approved, it can take **(22) 10 to 15 years**. It's such a long process.

**Chloe:** Exactly. And that's for a relatively straightforward pathogen. It's even harder for viruses that change all the time. I was reading about the difficulties in creating a vaccine for HIV. The main issue is that the virus **(23) mutates so rapidly**. The immune system can't keep up, and it makes it incredibly hard to design a vaccine that provides lasting protection.

**Liam:** That makes sense. And then there's the clinical trial process itself. It's so rigorous. You have the preclinical stage, then Phase 1 with a small group of volunteers, then Phase 2 with a few hundred, and finally Phase 3 with thousands. It's a **(24) very long and complex process**, but it has to be, to ensure the vaccine is safe and effective.

**Chloe:** For sure. And even after all that, there's no guarantee of success. I read that a major hurdle, even for promising vaccines, is **(25) manufacturing on a large scale**. It's one thing to make a few thousand doses in a lab, but producing millions or billions of doses that are all consistent and sterile is a huge logistical challenge.

**Liam:** That's a good point. We should definitely include that. And what about public perception? I think that's a critical factor too.

**Chloe:** Absolutely. No matter how good a vaccine is, it won't work if people don't take it. So, **(26) public trust and acceptance** is essential. We've seen that with the measles outbreaks in recent years.

**Liam:** I was also looking at future technologies. I found an article about vaccine delivery systems. They're developing a patch with tiny microneedles that you just press onto your skin. It's painless and doesn't require a trained professional to administer. So, in the future, vaccines might be **(27) delivered through a patch**.

**Chloe:** Wow, that's amazing. I've been reading about the search for universal vaccines. For example, a universal flu vaccine that would protect against all strains and you'd only need to get it once, or maybe every ten years. I'm really interested in the development of **(28) universal vaccines**.

**Liam:** That would be a game-changer. Okay, so I think we have plenty of content. We just need to structure it. I've made a start on the slides, but I think our **(29) conclusion** is a bit weak. We just sort of stop.

**Chloe:** I agree. We need a strong final message. How about we end with a summary of the main challenges and then a look forward to these future technologies? We could **(30) create a clear summary slide** that brings it all together.

**Liam:** Perfect. Let's work on that now.

## SECTION 4

**Lecturer:** Good morning. In today's lecture, we're going to discuss the global impact of vaccination, which is arguably one of the most significant public health achievements in human history. Vaccination programs have led to the control and, in some cases, the near-elimination of diseases that were once a major cause of death and disability.

Let's start with a couple of the most prominent historical success stories. The first, and most famous, is smallpox. For centuries, smallpox was a devastating disease. However, after a massive global vaccination campaign led by the World Health Organization, it was officially declared **(31) eradicated** in 1980. This is the only human disease to have been completely wiped out. Another incredible success story is polio. While not yet eradicated, we are very close. The Global Polio Eradication **(32) Initiative**, launched in 1988, has reduced cases by over 99%. A truly remarkable feat.

Beyond just preventing disease, vaccination has a profound economic and social impact. It dramatically reduces healthcare costs. It's far cheaper to prevent a disease than to treat it. It also prevents the long-term disability that can result from illnesses like polio or measles. This, in turn, increases **(33) productivity**, as it keeps adults healthy and able to work. For children, it means they are healthy enough to attend school, which has a huge impact on their education and future opportunities.

Now, a key concept in vaccination is 'herd immunity'. This is when a large enough portion of a community becomes immune to a disease, making its spread from person to person unlikely. This is critical for protecting **(34) vulnerable** populations – this includes infants who are too young to be vaccinated, and people with compromised immune systems who cannot receive certain vaccines. The percentage of people who need to be vaccinated to achieve herd immunity varies, but for a highly contagious disease like measles, it's around 95%.

However, achieving high vaccination rates globally is not without its challenges. One of the biggest is **(35) equity**. There is a significant gap in access to vaccines between high-income and low-income countries. Another major challenge is infrastructure. Many vaccines require a reliable "**(36) cold chain**" – a system of storing and transporting vaccines at consistently low temperatures. This can be very difficult to maintain in some parts of the world. We also face the challenge of misinformation, which can undermine public trust and lead to a decline in vaccination rates. And finally, geography plays a role. Reaching people in **(37) remote** areas, or in regions affected by conflict, can be incredibly difficult.

Several global organizations are working to address these challenges. The WHO and UNICEF are, of course, key players. Another important organization is Gavi, the Vaccine Alliance. Gavi is a **(38) partnership** between public and private sectors, and it has played a huge role in providing affordable vaccines to the world's poorest countries.

Looking to the future, there is much to be optimistic about. Scientists are working on new vaccines for diseases like malaria and tuberculosis. And new delivery methods, such as the microneedle patches I mentioned, could significantly improve **(39) coverage** by making administration easier. However, the recent COVID-19 pandemic has taught us that we cannot be complacent. We need continued investment in research and development, and strong **(40) collaboration** between countries to be prepared for future health crises. Thank you.

## **WRITING SECTION**

### **WRITING TASK 1**

You should spend about 20 minutes on this task.

**The chart below shows the global vaccination coverage for four childhood diseases in 2019 and 2021.**

**Summarise the information by selecting and reporting the main features, and make comparisons where relevant.**

Write at least 150 words.

**(A bar chart would be inserted here showing the following data):**

- **DTP (3rd dose):** 2019 - 86%, 2021 - 81%
- **Measles (2nd dose):** 2019 - 71%, 2021 - 69%
- **Polio (3rd dose):** 2019 - 85%, 2021 - 80%
- **Hepatitis B (3rd dose):** 2019 - 85%, 2021 - 80%

### **WRITING TASK 2**

You should spend about 40 minutes on this task.

Write about the following topic:

**Some people believe that vaccination should be mandatory for all citizens. Others argue that it should be an individual's choice.**

**Discuss both these views and give your own opinion.**

Give reasons for your answer and include any relevant examples from your own knowledge or experience.

Write at least 250 words.

## **SPEAKING SECTION**

### **Part 1: Introduction and interview (4-5 minutes)**

Let's talk about health and vaccination.

1. Have you received many vaccinations in your life?
2. What is your general opinion on vaccination programs?
3. Do you think it is important for children to be vaccinated? Why or why not?
4. Did you learn about the importance of vaccines when you were at school?
5. In your country, is it easy for people to get access to vaccinations?

## **Part 2: Individual long turn (3-4 minutes)**

*Describe a time you received a vaccination.*

*You should say:*

- *when and where you received it*
- *why you needed this particular vaccination*
- *how you felt before and after the injection*

*and explain what the overall experience was like.*

You will have 1 minute to prepare your talk, and then you will speak for 1-2 minutes.

## **Part 3: Two-way discussion (4-5 minutes)**

Let's discuss some more general questions related to this topic.

1. What are the broader benefits of having high vaccination rates in a population?
2. Why do you think some people are hesitant or opposed to vaccination?
3. To what extent should governments be able to make vaccinations mandatory for citizens?
4. What can be done to improve public education and trust in vaccination programs?
5. In the future, what new types of vaccines or vaccination methods do you think we might see?

## **GRAMMAR SECTION (20 questions)**

### **Questions 1-5: Error Correction**

*Identify the one underlined part that is incorrect and must be changed for the sentence to be correct.*

1. The development of new vaccines (A) **are** crucial for (B) **protecting** public health, especially © **against** emerging infectious (D) **diseases**.
2. Edward Jenner, (A) **who** is often called the father of immunology, (B) **has developed** the first successful vaccine © **for** smallpox (D) **in** 1796.
3. Despite (A) **of** the clear benefits, some people (B) **remain** hesitant © **about** getting (D) **vaccinated**.
4. The government has (A) **launched** a campaign (B) **to rise** awareness about the importance © **of** childhood (D) **immunization**.
5. If the vaccination rate (A) **will drop** further, we (B) **could see** a resurgence © **of** diseases that (D) **were** previously under control.

### **Questions 6-10: Sentence Transformation**

*Complete the second sentence so that it has a similar meaning to the first sentence, using the word given. Do not change the word given. You must use between three and six words, including the word given.*

1. The government made the vaccination program compulsory for all healthcare workers. **WAS** The vaccination program \_\_\_\_\_ compulsory for all healthcare workers.
2. “You should get a flu shot this year,” the doctor told me. **ADVISED** The doctor \_\_\_\_\_ a flu shot this year.
3. They didn not develop the vaccine overnight; it took many years of research. **TOOK** It \_\_\_\_\_ develop the vaccine.
4. The vaccine is not effective unless you receive two doses. **ONLY** The vaccine is effective \_\_\_\_\_ you receive two doses.
5. It is believed that herd immunity protects the most vulnerable members of society. **IS** Herd immunity \_\_\_\_\_ the most vulnerable members of society.

### **Questions 11-15: Fill in the blanks**

*Complete the sentences with a suitable word. Use only one word for each gap.*

1. The new vaccine is currently \_\_\_\_\_ developed by a team of international scientists.
2. The nurse administered the injection \_\_\_\_\_ a great deal of care.
3. \_\_\_\_\_ you been vaccinated against tetanus before you travelled?
4. The article I read explained \_\_\_\_\_ vaccines work in the human body.
5. This vaccine provides protection \_\_\_\_\_ several strains of the virus.

### **Questions 16-20: Word Formation**

*Use the word in capitals to form a word that fits in the gap in the same line.*

1. The \_\_\_\_\_ of smallpox was a major public health achievement.  
(ERADICATE)
2. It is \_\_\_\_\_ for children to receive their routine vaccinations.  
(BENEFIT)
3. The \_\_\_\_\_ of the new vaccine was tested in a large clinical trial.  
(EFFECTIVE)
4. Vaccine \_\_\_\_\_ is a growing concern for public health officials.  
(HESITATE)
5. The program aims to ensure the \_\_\_\_\_ distribution of vaccines worldwide.  
(EQUITY)

## **ANSWER KEY**

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### **Reading Section**

1. FALSE
2. FALSE
3. FALSE
4. NOT GIVEN
5. FALSE

- 6. TRUE
- 7. B
- 8. C
- 9. C
- 10. C
- 11. variolation
- 12. combination
- 13. equitable
- 14. iii
- 15. vi
- 16. i
- 17. iv
- 18. v
- 19. viii
- 20. B
- 21. B
- 22. B
- 23. C
- 24. orchestrating
- 25. booster shots
- 26. triggers
- 27. NO
- 28. NO
- 29. YES
- 30. NO
- 31. YES
- 32. NOT GIVEN
- 33. C
- 34. B

- 35. C
- 36. C
- 37. misinformation
- 38. immune system
- 39. personalized
- 40. microneedle

## **Listening Section**

- 1. Williams
- 2. 07700 900 821
- 3. Southeast Asia
- 4. 28th of February
- 5. Tetanus
- 6. 5th of February
- 7. 2:15 PM
- 8. Orchard
- 9. travel itinerary
- 10. 50
- 11. B
- 12. A
- 13. C
- 14. A
- 15. C
- 16. C
- 17. B
- 18. D
- 19. F
- 20. E
- 21. B

- 22. A
- 23. B
- 24. C
- 25. A
- 26. B
- 27. A
- 28. B
- 29. C
- 30. C
- 31. eradicated
- 32. Initiative
- 33. productivity
- 34. vulnerable
- 35. equity
- 36. cold chain
- 37. remote
- 38. partnership
- 39. coverage
- 40. collaboration

## Grammar Section

- 1. A (is)
- 2. B (developed)
- 3. A (of)
- 4. B (raise)
- 5. A (drops)
- 6. was made

7. advised me to get
8. took many years to
9. only if
10. is believed to protect
11. being
12. with
13. Had
14. how
15. against
16. eradication
17. beneficial
18. effectiveness
19. hesitancy
20. equitable

## TUTOR GUIDE

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### Model Answer for Writing Task 1

The bar chart illustrates the changes in global vaccination coverage for four key childhood diseases—DTP, Measles, Polio, and Hepatitis B—between the years 2019 and 2021.

Overall, the data reveals a slight but consistent decrease in vaccination rates across all four diseases over the two-year period. In both years, the coverage for DTP, Polio, and Hepatitis B was significantly higher than for the second dose of the measles vaccine.

In 2019, the vaccination coverage for the third dose of DTP was 86%, which was the highest rate among the four diseases. The rates for the third dose of Polio and

Hepatitis B were just slightly lower, at 85% each. However, by 2021, the coverage for DTP had fallen by five percentage points to 81%, and both Polio and Hepatitis B saw a similar drop to 80%. This indicates a worrying trend in the reach of these fundamental childhood immunization programs.

The coverage for the second dose of the measles vaccine was considerably lower than the other three in both years. In 2019, it stood at 71%, and this figure decreased to 69% in 2021. This two-percentage-point drop, while smaller in absolute terms, is significant given the already lower coverage rate for this important vaccine.

## **Model Essay for Writing Task 2 (Band 9)**

The issue of mandatory vaccination is a complex and often contentious topic, balancing the principles of public health against individual autonomy. While some argue that compulsory vaccination is a necessary measure to protect the community, others vehemently defend the right of individuals to make their own medical choices. This essay will discuss both perspectives before offering a concluding viewpoint.

On one hand, the argument for mandatory vaccination is primarily rooted in the concept of herd immunity and the collective responsibility to protect public health. Proponents of this view contend that high vaccination rates are essential to create a protective shield for the entire population, particularly for the most vulnerable members of society who cannot be vaccinated due to age or medical conditions. The eradication of smallpox and the near-elimination of polio stand as powerful testaments to the success of widespread immunization programs. From this perspective, choosing not to vaccinate is not merely a personal decision but one that can have serious consequences for the community at large, potentially leading to the resurgence of preventable diseases. Therefore, governments have a legitimate role in mandating vaccinations as a critical public health intervention.

On the other hand, opponents of mandatory vaccination emphasize the importance of individual liberty and bodily autonomy. They argue that every person has the right to make informed decisions about their own healthcare, and that this right should not be infringed upon by the state. This viewpoint is often supported by concerns about the potential side effects of vaccines, as well as a general distrust of pharmaceutical companies and government institutions. For these individuals, the decision to vaccinate should be a matter of personal choice, based on their own beliefs, values, and assessment of the risks and benefits. Forcing individuals to undergo a medical procedure against their will is seen as a violation of fundamental human rights.

In my opinion, while the principle of individual choice is important, it should not outweigh the collective responsibility to protect public health, especially when it comes to highly infectious and dangerous diseases. The benefits of vaccination, both for the individual and for society, are overwhelmingly supported by scientific evidence. Therefore, I believe that governments are justified in mandating vaccinations for certain diseases, particularly for attendance at public schools and for employment in high-risk sectors like healthcare. However, such policies must be implemented with transparency, providing clear information and education to the public, and should include medical exemptions where appropriate. The goal should be to maximize public health protection while respecting individual rights to the greatest extent possible.

## **Speaking Part 2 Sample Response**

I'd like to talk about the time I received my COVID-19 vaccination. This was back in the spring of 2021, at a large vaccination centre that had been set up in a local exhibition hall. It was a very well-organized and impressive operation.

I needed this particular vaccination because, of course, we were in the midst of the global pandemic. The vaccine had been developed to protect against the virus, and it was being rolled out to the public. I was very keen to get it, not only to protect myself but also to do my part in helping to stop the spread of the virus and protect my family and the wider community. It felt like a really important step towards getting back to some sense of normality.

Before the injection, I have to admit I was a little bit nervous. It wasn't about the needle itself, but more about the fact that this was a new vaccine and there was so much discussion and debate about it in the media. However, the staff at the vaccination centre were incredibly professional and reassuring. They answered all my questions and made me feel at ease. The injection itself was very quick and almost painless. Afterwards, I had to wait for about 15 minutes to make sure I didn't have any immediate reaction. My arm was a bit sore for a day or two, and I felt a little tired, but that was it.

The overall experience was very positive. It felt like I was part of a huge, collective effort. There was a real sense of community and hope in the air. It was a very memorable and significant moment for me, and I was very grateful to all the scientists and healthcare workers who made it possible.

## Key Vocabulary List

1. **Immunization:** The process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine.
2. **Vaccination:** The administration of a vaccine to help the immune system develop protection from a disease.
3. **Pathogen:** A bacterium, virus, or other microorganism that can cause disease.
4. **Antigen:** A toxin or other foreign substance which induces an immune response in the body, especially the production of antibodies.
5. **Antibody:** A blood protein produced in response to and counteracting a specific antigen.
6. **Herd Immunity:** The resistance to the spread of a contagious disease within a population that results if a sufficiently high proportion of individuals are immune to the disease, especially through vaccination.
7. **Eradication:** The complete and permanent worldwide reduction to zero new cases of an infectious disease through deliberate efforts.
8. **Mandatory:** Required by law or rules; compulsory.
9. **Autonomy:** The right or condition of self-government; the freedom to make one's own decisions.
10. **Hesitancy:** The quality or state of being hesitant; a reluctance to act or to accept an idea.
11. **Efficacy:** The ability to produce a desired or intended result.
12. **Resurgence:** An increase or revival after a period of little activity, popularity, or occurrence.
13. **Vulnerable:** Susceptible to physical or emotional attack or harm.
14. **Administer:** To dispense or apply (a remedy or drug).
15. **Booster shot:** An extra dose of a vaccine, given to increase or renew the effect of an earlier one.
16. **Side effect:** A secondary, typically undesirable effect of a drug or medical treatment.
17. **Clinical trial:** A research study in human volunteers to answer specific health questions.

18. **Misinformation:** False or inaccurate information, especially that which is deliberately intended to deceive.
19. **Equitable:** Fair and impartial.
20. **Inoculate:** To treat with a vaccine to produce immunity against a disease; to vaccinate.