

## NOTE TAKING SHEET

**A. Listen to the lecture about how to feed the planet and take notes. You can use the titles as a guide or take extra notes related to each speaker. Make sure to note key details about solutions. Listen to the audio TWICE. This paper WILL NOT be graded. You have to encode your answers on the optical form.**

### **Introduction**

Challenge:

Problem:

### **Solution 1: Micro-Livestock**

Examples:

Benefits:

Challenges:

### **Solution 2. Cultured Meat**

Definition:

Benefits:

Challenges:

### **Solution 3: Green Super Rice**

Development:

Benefits:

Challenges:

### **Solution 4: Greening Deserts**

Technology:

Process:

Challenges:

### **Conclusion**

Key Message:

Suggestions:

### **Additional Notes:**

**\*Note: You will not receive the exam questions before listening to the recording. After listening twice and taking notes, you will be given a multiple-choice exam with four options per question (10 questions total). Mark the correct answers based on your notes.**

## PART I. LISTENING

### A. Use your notes to answer these questions.

1. What is the main problem mentioned regarding food production by 2050?
  - A. The increasing population will demand more agricultural land.
  - B. There will be limited forests available for agricultural expansion.
  - C. Natural resources are insufficient to meet doubled food demand.
  - D. Rivers and water sources are being excessively polluted.
2. Why is the idea of 'micro-livestock' considered beneficial?
  - A. It provides a sustainable alternative to traditional livestock farming.
  - B. Insects require a significant amount of land and water to farm.
  - C. People worldwide have already adapted to eating insects.
  - D. Farming micro-livestock is a complex and expensive process.
3. What is a major drawback of eating insects as a food source?
  - A. Insects have insufficient protein compared to cows or sheep.
  - B. The farming of insects requires advanced technology.
  - C. Insects are not a viable option for large-scale food production.
  - D. Most people feel uneasy about eating insects.
4. What is cultured meat, and why is it a potential solution?
  - A. Meat grown in large agricultural spaces, reducing deforestation.
  - B. Meat developed from stem cells, needing fewer resources to produce.
  - C. A genetically modified meat product that tastes identical to real meat.
  - D. An expensive but environmentally harmful alternative to animal farming.
5. What is a key disadvantage of cultured meat at the moment?
  - A. It looks and tastes unappealing compared to regular meat.
  - B. It requires more energy and land than livestock farming.
  - C. The manufacturing process depends heavily on genetically modified crops.
  - D. The taste is bland because it lacks protein and nutrients.
6. What is 'green super rice,' and how is it developed?
  - A. A genetically engineered crop to withstand diseases and insects.
  - B. A combination of traditional and GM technology to improve rice yields.
  - C. A variety of rice resistant to diseases, developed from existing strains.
  - D. A synthetic food source that uses fewer resources than conventional rice.
7. What has been a significant contribution of Zhikang Li?
  - A. Developing genetically modified rice through modern technology.
  - B. Collaborating with scientists globally to create rice-resistant genes.
  - C. Spending years creating rice that can survive hostile conditions naturally.
  - D. Introducing GM rice to over sixteen countries worldwide.
8. What is the concept of 'greening deserts,' and why is it significant?
  - A. Growing crops in fertile lands near desert areas.
  - B. Converting coastal deserts into agricultural hubs using seawater.
  - C. Using GM technology to grow food in arid desert regions.
  - D. Applying desalination techniques to create freshwater for plants.
9. What is a key challenge with 'seawater greenhouses'?
  - A. The technology is effective but disrupts desert ecosystems.
  - B. It requires advanced GM techniques for successful implementation.
  - C. The water produced is insufficient to sustain large-scale agriculture.
  - D. It has failed to produce significant yields in desert environments.

10. What does the speaker suggest as a way to address the food crisis?
- A. Switching entirely to alternative food sources like insects or cultured meat.
  - B. Encouraging responsible eating habits and reduced meat consumption.
  - C. Expanding agricultural land through deforestation.
  - D. Increasing reliance on genetically modified crops globally.

**B. Listen to the audio about meat production and answer the questions according to it. You will have 45 seconds to look at the question. You will hear the recording TWICE.**

1. What is the main environmental issue related to meat production mentioned in the show?
- A. Meat production is a major cause of pollution and contributes to global climate change.
  - B. It causes the destruction of forests, which leads to a loss of biodiversity and wildlife.
  - C. It uses an excessive amount of water, which is particularly problematic in dry regions.
  - D. Meat production increases the use of chemicals in farming, leading to soil degradation.
2. Who created the stem cell burger that was presented on the show?
- A. Hanni Rützler, a food expert who studies the relationship between diet and health.
  - B. Josh Schonwald, an American food writer who focuses on sustainable food and innovation.
  - C. Mark Post, a physiologist from Maastricht University who specializes in stem cell research.
  - D. Richard McGeown, a professional chef known for his work in advanced cooking techniques.
3. How did the stem cell burger differ from a regular burger in appearance?
- A. The stem cell burger was larger and had a bright red color, unlike regular burgers.
  - B. It looked similar to a regular burger but was slightly paler in color and less vibrant.
  - C. The burger was square-shaped and much darker compared to a regular beef burger.
  - D. The stem cell burger was smaller and had a greenish hue, which made it look unusual.
4. What ingredient was used to color the stem cell burger to make it look like meat?
- A. The burger was colored using beetroot juice and saffron to give it a meat-like appearance.
  - B. Tomato paste and paprika were used to give the burger a red hue similar to cooked beef.
  - C. Spinach and turmeric were used to create a yellowish-red tint that resembled meat.
  - D. The burger was colored with carrot juice and saffron to create a reddish-brown color.
5. How was the stem cell burger cooked?
- A. The burger was boiled for 10 minutes to ensure it was tender and fully cooked.
  - B. It was cooked in a frying pan with butter and sunflower oil, which gave it a crispy texture.
  - C. The burger was baked in a conventional oven for about 20 minutes to cook it evenly.
  - D. It was grilled over an open fire, giving it a smoky flavor and slightly charred exterior.
6. According to Lucy Summers, what was missing from the stem cell burger that affected its taste?
- A. The burger lacked a smoky flavor, which many people associate with grilled meat.
  - B. It was missing proper seasoning and fat, making it less juicy and flavorful than expected.
  - C. The burger had too much spice, which made the taste unbalanced and overpowering.
  - D. It didn't have the crispy texture that most people expect from a traditional burger.
7. What was the main component of the stem cell burger made from?
- A. The burger was made from plant-based proteins offering a more sustainable alternative.
  - B. It was primarily made from cow muscle tissue, using stem cells to mimic real meat.
  - C. The burger was created using synthetic meat fibers designed to replicate the texture of beef.
  - D. Chicken cells were used to create a similar texture and appearance to beef.
8. How long did it take for Professor Post and his team to develop the stem cell burger?
- A. Two years to design and perfect the stem cell burger using advanced scientific methods.
  - B. More than five years, as the team needed time to research and test different techniques.
  - C. Ten years of development before they were able to create a successful stem cell burger.
  - D. Over 20 years to complete because of challenges to overcome before they achieved their goal.

9. How much did it cost to create the stem cell burger?
- A. The development of the burger costing only about €25,000 due to simpler methods.
  - B. The total cost of creating the burger was around €50,000,
  - C. The project cost €150,000 with both research and small-scale production costs.
  - D. It cost about €250,000 to create the stem cell burger with the advanced technology
10. What does Professor Post predict about the availability of stem cell burgers in supermarkets?
- A. Stem cell burgers will be available in supermarkets within the next five years,
  - B. It will take 10 to 20 years before stem cell burgers are widely available in supermarkets.
  - C. Stem cell burgers will never be sold in supermarkets due to high production costs.
  - D. Stem cell burgers will be available in a few months with an alternative to traditional beef.

## **PART II. READING**

### **Discover New Zealand: A Land of Wonders and Cultural Depth**

Surrounded by the Pacific Ocean and the Tasman Sea, New Zealand is a breathtaking island nation located in the southern hemisphere. Famous for its striking natural beauty, rich biodiversity, and vibrant Maori traditions, the country offers an extraordinary blend of cultural and ecological treasures. Over a thousand years ago, Polynesian navigators known as the Maori arrived and established a flourishing culture. Today, New Zealand is home to nearly five million people, spread across its two main islands, covering 268,000 square kilometers. Despite its size, the country boasts an array of unique experiences for every kind of traveler.

#### **Aotearoa: The Land of the Long White Cloud**

Auckland, the country's largest city, is a common starting point for visitors. Its skyline, dominated by the Sky Tower, contrasts beautifully with its green parks and harbors. Known for its diversity, Auckland offers a vibrant arts and food scene, where traditional Maori cuisine meets international flavors. Visitors can explore its dynamic neighborhoods, visit top-tier museums, and enjoy a lively nightlife.

The city enjoys a temperate climate, with mild winters and warm summers. During summer, long daylight hours provide plenty of opportunities for outdoor adventures and waterfront activities.

#### **Rotorua: A Geothermal Paradise**

Located on the North Island, Rotorua is renowned for its dramatic geothermal features, such as steaming geysers, *bubbling mud pools*, and soothing hot springs. This activity is a result of the region's location on the Pacific Ring of Fire, which creates a landscape unlike any other.

Rotorua is also a hub for Maori cultural experiences, offering insights into traditional arts, music, and rituals. A highlight for many visitors is the Pohutu Geyser, which erupts multiple times daily, reaching heights of up to 30 meters. For relaxation, the Polynesian Spa provides thermal mineral pools perfect for unwinding after exploring.

#### **Queenstown: Adventure Awaits**

Situated in the Southern Alps, Queenstown is widely regarded as the "Adventure Capital of the World." It draws thrill-seekers from around the globe with activities like bungee jumping, skydiving, and jet boating. In winter, the region transforms into a snowy haven for skiers and snowboarders.

The natural beauty surrounding Queenstown is equally remarkable, with towering peaks, clear lakes, and dense forests. Hiking trails like the Routeburn Track provide stunning views and opportunities to connect with nature.

### **Milford Sound: Nature's Masterpiece**

Milford Sound, located within Fiordland National Park, is often called one of the most beautiful places on Earth. Its sheer cliffs, cascading waterfalls, and calm fjord waters create a truly magical setting. Boat tours offer close-up encounters with wildlife, such as dolphins, penguins, and seals.

The drive to Milford Sound is just as impressive as the destination, winding through rainforests and rugged coastlines. Often shrouded in mist, the area has an almost mystical atmosphere.

In conclusion, New Zealand is a land where nature and culture come together in perfect harmony. From vibrant cities to serene landscapes, it offers unforgettable experiences for every traveler. Whether you're seeking adventure, relaxation, or cultural immersion, New Zealand is a destination that promises to leave a lasting impression.

1. What is the main purpose of the text?
  - A. To compare New Zealand's cities with those in other countries.
  - B. To promote New Zealand as a diverse travel destination.
  - C. To provide detailed historical accounts of Maori traditions.
  - D. To explain the geographical formation of New Zealand.
  
2. The author mentions Rotorua's *bubbling mud pools* to indicate that \_\_\_\_\_.
  - A. Rotorua's climate is mostly cold, with icy conditions.
  - B. Rotorua has distinct geothermal features that draw tourists.
  - C. Rotorua's landscape consists mainly of volcanic terrain with few attractions.
  - D. Rotorua is mainly known for its snow-covered mountains and ski activities.
  
3. What does the text suggest about Auckland's appeal?
  - A. The city offers a harmonious mix of cultural activities and natural landscapes.
  - B. Its temperate climate makes it ideal for seasonal travelers seeking warmth.
  - C. Auckland's harbor and Sky Tower dominate its identity as a bustling port city.
  - D. It is the perfect location for experiencing Maori traditions exclusively.

**! This is a sample reading passage to show the complexity and length of a typical reading passage in an exemption test. The reading part consists of 4 reading passages with five multiple-choice questions for each reading.**

## WRITING

Choose **ONE** of the topics below and write a well-structured essay of **350-400** words. Your essay should consist of **4-5 paragraphs**, including a **title**, an **introduction**, **3 body paragraphs**, and a **conclusion**.

1. Social media has become an integral part of teenagers' lives, offering both opportunities and challenges. Write an essay discussing the various causes or effects of using social media among teenagers and **write a cause or effect essay**.
2. Vaccinations play a crucial role in public health by preventing the spread of infectious diseases. Write **an argumentative essay** and argue for or against the necessity of making vaccinations mandatory for all citizens. Consider the implications for public health and societal benefits in your argument. Provide strong arguments and evidence to support your position.
3. Switching to renewable energy sources like solar, wind, and hydroelectric power is important for protecting the environment and slowing down climate change. Write **an problem solution essay** about the problems with adopting renewable energy and suggest solutions. Explain the environmental and economic benefits of your solutions.
4. Compare or contrast the parenting styles of strict discipline versus permissive parenting. Discuss differences or similarities in child behaviour and family dynamics, and evaluate each approach to write **a compare or contrast essay**.







