

# Year 2023

# Otsuma Nakano Junior High School

# Entrance Exam

November 5, 2022

## English

Attention:

1. This test has two reading tasks and one essay writing task.
2. Write your name and your application ID number on the booklet and your answer sheet.
3. The test duration time is 40 minutes.
4. Write your answers on your answer sheet.
5. The full score scale of this test is 100 points.

Application ID. No.		Name in Kanji	
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## 1-A. Reading

Instruction: Read the following passage and circle the best possible answer.

### Active and Passive Transport

All living things are made up of tiny units called cells. The cells are surrounded by a covering called a membrane. The membrane controls what moves in and out of the cell.

Cells need many kinds of materials in order to thrive. They must have water, oxygen, glucose (sugar), sodium, potassium and a variety of other minerals. The body has to have a delivery system to get these materials where they need to go. In addition, every cell produces waste materials that it needs to get rid of. The body has to have a method of waste collection and disposal. Like a fleet of trucks form a transport system to pick up and deliver goods in the world, the body has a transport system, too. There are two types of transport: active transport, and passive transport.

Passive transport is easiest for the cells because they don't need to use any energy to make it happen. Diffusion is the simplest and most common form of passive transport. During the diffusion process, tiny particles of the materials that need to be delivered to the cells are spread through either a gas, like oxygen, or a liquid, like water. Areas with high concentrations of the materials slowly diffuse them to areas of low concentration of the materials. Osmosis is a unique form of passive transport that allows water to pass through the cell membrane but keeps most other materials out.

Active transport is used when the concentration of materials inside the cell is high, and the cell needs to push materials in to areas of high concentration of the materials. Unfortunately, active transport is used when the concentration of materials inside the cell is high, and the cell needs to push materials in to areas of high concentration of the materials. This causes the cell use energy. One example of this is how nerve cells work. They pump sodium out and pull potassium in. Although they must expend energy in this process, doing so allows them to thrive.

1. What is the covering around a cell called?
  - a. covering cell
  - b. thriving materials
  - c. membrane
  - d. waste collection
  
2. How are active and passive transport different?
  - a. Active transport moves materials from low concentration to high and requires energy. Passive transport moves from high concentration to low and does not require energy.
  - b. Passive transport moves materials from low concentration to high and requires energy. Active transport moves from high concentration to low and does not require energy.
  - c. Active transport needs many kinds of materials in order to thrive. Passive transport has to have a delivery system to get these materials where they need to go.
  - d. There is no difference because these two systems exist in the same cell.
  
3. What is the best way to describe osmosis?
  - a. It is active transport when the concentration of materials inside the cell is high, and the cell needs to push materials in to areas of high concentration of the materials
  - b. A type of diffusion that allows water in but keeps most other materials out.
  - c. A unique form of passive transport that allows water to pass through the cell membrane but keeps most other materials.
  - d. None of the above accurately explain what osmosis is.
  
4. What comparison is made to help the reader of this passage better understand how materials are moved throughout the body?
  - a. osmosis
  - b. active and passive transport
  - c. pump sodium in and pull potassium out
  - d. a fleet of trucks
  
5. Name one type of cell that uses active transport.
  - a. nerve cells
  - b. tiny cells
  - c. high cell
  - d. oxygen cells

## 1-B. Reading

Instruction: Read the following passage and then choose the best answers to the questions below.

### **A Career in the Video Game Industry**

Do you love to play video games? Are you creative, dedicated, and determined to remain young at heart? Then a career as a video game designer may be the ideal career for you. It's a competitive business that can be difficult to break into; but like all businesses, there is always room for innovative new talent.

There are two basic roles when it comes to creating video games — game design and game development — and they represent two distinct career paths. Game designers are responsible for coming up with new game concepts. They figure out the storylines (for games that involve stories) and how the mechanics of the game will work. Game developers do the actual hands-on work of making the games, which can include anything and everything from animation to computer programming. The designer gives the developer input and direction; but the hands-on perspective of the developer often allows him or her to make improvements to the original game design. While they have very different roles, game designers and game developers work closely together, and both are equally important to the finished product.

In addition to loving to play video games, certain personality traits lend themselves more than others to a career in the video game industry. Video games are created by teams, so strong communication skills are a must. A strong attention to detail and an ability to work under pressure are both also important. So is the ability to figure out whether or not a game, or an idea for a game, is a good one or a bad one. If you love playing video games, play a wide variety of games, and play often then this is a skill that often comes with time and experience.

1. What is the main idea of this reading?
  - a. To enjoy playing video games.
  - b. There are two basic roles in creating video games; game design and game development.
  - c. Personality traits are important in the video game industry.
  - d. Making a career in the video game industry
  
2. Which of the following is not a factor in the video game industry?
  - a. Knowing which computer company is the most popular.
  - b. Game design and game development.
  - c. Strong communication skills are emphasized.
  - d. Being detailed in your work is a must.
  
3. What is another way to say the following sentence?

Game developers do the actual hands-on work of making the games.

- a. Game developers physically make the games with their hands without using software.
  - b. Game developers are involved in the making of the games.
  - c. Game developers actually have their hands animated into the games.
  - d. Game developers make games but don't actually use their hands.
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4. Which word best matches the meaning of personality trait?
    - a. normality
    - b. dislike
    - c. character
    - d. humorous
  
  5. Which of the following sentences means; there is enough space for more gifted people?
    - a. There are two basic roles when it comes to creating video games.
    - b. Game designers and game developers work closely together.
    - c. Game design and game development —they represent two distinct career paths.
    - d. There is always room for innovative new talent.

## 2. Writing

Task: Write an essay on the following subject.

What do you want to be when you grow up? Write three convincing reasons as to how you will accomplish this.

Please write a topic sentence in the first paragraph, three body paragraphs with details, and a conclusion paragraph.

( 100 - 150 words )

The blank space below is available for you to brainstorm.