dreamsky@dreamsky.com.vn
www.dreamsky.edu.vn
https://www.facebook.com/Dreamskyenglish/
0989 087 518

IELTS FIGHTER

TEST 1: READING & WRITING

Student's name: ..... Teacher: Ms/Mr.....	**Score:** **READING:**..... **WRITING:**.....

READING I:

Anesthesiology

Since the beginning of time, man has sought natural remedies for pain. Between 40 and 60 A.D., Greet? physician, Dioscorides traveled with the Roman armies, studying the medicinal properties of plants and minerals. His book, De materia medica, written in five volumes and translated into at least seven languages, was the primary reference source for physicians for over sixteen centuries. The field of anesthesiology[1], which was once nothing more than a list of medicinal plants and makeshift remedies, has grown into one of the most important fields in medicine.

Many of the early pain relievers were based on myth and did little to relieve the suffering of an ill or injured person. The mandragora (now known as the mandrabe plant) was one of the first plants to be used as an anesthetic[1]. Due to the apparent screaming that the plant made as it was pulled from the ground, people in the Middle Ages believed that the person who removed the mandrabe from the earth would either die or go insane. This superstition may have resulted because the split root of the mandrabe resembled the human form. In order to pull the root from the ground, the plant collector would loosen it and tie the stem to an animal. It was believed that the safest time to uproot a mandrabe was in the moonlight, and the best animal to use was a black dog. In his manual, Dioscorides suggested boiling the root with wine and having a man drinb the potion to remove sensation before cutting his flesh or burning his skin. Opium and Indian hemp were later used to induce sleep before a painful procedure or to relieve the pain of an illness. Other remedies such as cocaine did more harm to the patient than good as people died from their addictions. President Ulysses S. Grant became addicted to cocaine before he died of throat cancer in 1885.

The modern field of anesthetics dates to the incident when nitrous oxide (more commonly known as laughing gas) was accidentally discovered. Humphrey Davy, the inventor of the miner's lamp, discovered that inhaling the toxic compound caused a strange euphoria, followed by fits of laughter, tears, and sometimes unconsciousness. U.S. dentist, Horace Wells, was the first on record to experiment with laughing gas, which he used in 1844 to relieve pain during a tooth extraction. Two years later. Dr. William Morton created the first anesthetic machine. This apparatus was a simple glass globe containing an ether-soaked sponge. Morton considered ether a good alternative to nitrous oxide because the numbing effect lasted considerably longer. His apparatus allowed the patient to inhale vapors[1] whenever the pain became unbearable. In 1846, during a trial experiment in Boston,

a tumor[2] was successfully removed from a man's jaw area while he was anesthetized with Morton's machine.

The first use of anesthesia in the obstetric field occurred in Scotland by Dr. James Simpson. Instead of ether, which he considered irritating to the eyes, Simpson administered chloroform to reduce the pain of childbirth. Simpson sprinkled chloroform on a handkerchief and allowed laboring[3] women to inhale the fumes at their own discretion. In 1853, Queen Victoria agreed to use chloroform during the birth of her eighth child. Soon the use of chloroform during childbirth was both acceptable and fashionable. However, as chloroform became a more popular anesthetic, knowledge of its toxicity surfaced, and it was soon obsolete.

After World War II, numerous developments were made in the field of anesthetics. Surgical procedures that had been unthinkable were being performed with little or no pain felt by the patient. Rather than physicians or nurses who administered pain relief as part of their profession, anesthesiologists became specialists in suppressing consciousness and alleviating pain. Anesthesiologists today are classified as perioperative physicians, meaning they take care of a patient before, during, and after surgical procedures. It takes over eight years of schooling and four years of residency until an anesthesiologist is prepared to practice in the United States. These experts are trained to administer three different types of anesthetics: general, local, and regional. General anesthetic is used to put a patient into a temporary state of unconsciousness. Local anesthetic is used only at the affected site and causes a loss of sensation. Regional anesthetic is used to block the sensation and possibly the movement of a larger portion of the body. As u/ell as controlling the levels of pain for the patient before and throughout an operation, anesthesiologists are responsible for monitoring and controlling the patient's vital functions during the procedure and assessing the medical needs in the post-operative room.

The number of anesthesiologists in the United States has more than doubled since the 1970s, as has the improvement and success of operative care. In addition, complications from anesthesiology have declined dramatically. Over 40 million anesthetics are administered in the United States each year, with only 1 in 250,000 causing death.

Questions 1-6

*Do the following statements agree with the information in Passage 3? In boxes **1-6** on your Answer Sheet write*

***TRUE** if the statement is true according to the passage.*

***FALSE** if the statement contradicts the passage.*

***NOT GIVEN** inhere is no information about this in the passage.*

1. Dioscorides' book, De materia medica, fell out of use after 60 A.D…….

2. Mandragora was used as an anesthetic during the Middle Ages……..

3. Nitrous oxide can cause the user to both laugh and cry……..

4. During the second half of the 19th century, most dentists used anesthesia…….

5. Anesthesiologists in the United States are required to have 12 years of education and training…….

6. There are fewer anesthesiologists in the United States now than in the past……..

Questions 7-12

Match each fact about anesthesia with the type of anesthetic that it refers to.

There are more types of anesthetics listed than facts, so you won't use them all.

*Write the correct letter, **A-H** in boxes **7-12** on your Answer Sheet.*

Types of Anesthetic

A	general anesthetic
B	local anesthetic
C	regional anesthetic
D	chloroform
E	ether
F	nitrous oxide
G	opium
H	mandrake

7. used by sprinkling on a handkerchief……

8. used on only one specific part of the body……

9. used by boiling with wine……

10. used first during a dental procedure……..

11. used to stop feeling over a larger area of the body……

12. used in the first anesthetic machine……..

READING II:

The Search for the Anti-aging Pill

In government laboratories and elsewhere, scientists are seeking a drug able to prolong life and youthful vigor. Studies of caloric restriction are showing the way

As researchers on aging noted recently, no treatment on the market today has been proved to slow human aging - the build-up of molecular and cellular damage that increases vulnerability to infirmity as we grow older. But one intervention, consumption of a low-calorie* yet nutritionally balanced diet, works incredibly well in a broad range of animals, increasing longevity and prolonging good health. Those findings suggest that caloric restriction could delay aging and increase longevity in humans, too.

Unfortunately, for maximum benefit, people would probably have to reduce their caloric intake by roughly thirty per cent, equivalent to dropping from 2,500 calories a day to 1,750. Few mortals could stick to that harsh a regimen, especially for years on end. But what if someone could create a pill that mimicked the physiological effects of eating less without actually forcing people to eat less? Could such a 'caloric-restriction mimetic', as we call it, enable people to stay healthy longer, postponing age-related disorders (such as diabetes, arteriosclerosis, heart disease and cancer) until very late in life? Scientists first posed this question in the mid-1990s, after researchers came upon a chemical agent that in rodents seemed to reproduce many of caloric restriction's benefits. No compound that would safely achieve the same feat in people has been found yet, but the search has been informative and has fanned hope that caloric-restriction (CR) mimetics can indeed be developed eventually.

The benefits of caloric restriction

The hunt for CR mimetics grew out of a desire to better understand caloric restriction's many effects on the body. Scientists first recognized the value of the practice more than 60 years ago, when they found that rats fed a low-calorie diet lived longer on average than free-feeding rats and also had a reduced incidence of conditions that become increasingly common in old age. What is more, some of the treated animals survived longer than the oldest-living animals in the control group, which means that the maximum lifespan (the oldest attainable age), not merely the normal lifespan, increased. Various interventions, such as infection-fighting drugs, can increase a population's average survival time, but only approaches that slow the body's rate of aging will increase the maximum lifespan.

The rat findings have been replicated many times and extended to creatures ranging from yeast to fruit flies, worms, fish, spiders, mice and hamsters. Until fairly recently, the studies were limited to short-lived creatures genetically distant from humans. But caloric-restriction projects underway in two species more closely related to humans - rhesus and squirrel monkeys - have made scientists optimistic that CR mimetics could help people.

The monkey projects demonstrate that, compared with control animals that eat normally, caloric-restricted monkeys have lower body temperatures and levels of the pancreatic hormone insulin, and they retain more youthful levels of certain hormones that tend to fall with age.

The caloric-restricted animals also look better on indicators of risk for age-related diseases. For example, they have lower blood pressure and triglyceride levels (signifying a decreased likelihood of heart disease), and they have more normal blood glucose levels (pointing to a reduced risk for diabetes, which is marked by unusually high blood glucose levels). Further, it has recently been shown that rhesus monkeys kept on caloric-restricted diets for an extended time (nearly 15 years) have less chronic disease. They and the other monkeys must be followed still longer, however, to know whether low-calorie intake can increase both average and maximum lifespans in monkeys. Unlike the multitude of elixirs being touted as the latest anti-aging cure, CR mimetics would alter fundamental processes

that underlie aging. We aim to develop compounds that fool cells into activating maintenance and repair.

How a prototype caloric-restriction mimetic works

The best-studied candidate for a caloric-restriction mimetic, 2DG (2-deoxy-D-glucose), works by interfering with the way cells process glucose. It has proved toxic at some doses in animals and so cannot be used in humans. But it has demonstrated that chemicals can replicate the effects of caloric restriction; the trick is finding the right one.

Cells use the glucose from food to generate ATP (adenosine triphosphate), the molecule that powers many activities in the body. By limiting food intake, caloric restriction minimizes the amount of glucose entering cells and decreases ATP generation. When 2DG is administered to animals that eat normally, glucose reaches cells in abundance but the drug prevents most of it from being processed and thus reduces ATP synthesis. Researchers have proposed several explanations for why interruption of glucose processing and ATP production might retard aging. One possibility relates to the ATP-making machinery's emission of free radicals, which are thought to contribute to aging and to such age-related diseases as cancer by damaging cells. Reduced operation of the machinery should limit their production and thereby constrain the damage. Another hypothesis suggests that decreased processing of glucose could indicate to cells that food is scarce (even if it isn't) and induce them to shift into an anti-aging mode that emphasizes preservation of the organism over such 'luxuries' as growth and reproduction.

*** caloric: a measure of the energy value of food**

Questions 1-5

Do the following statements agree with the claims of the writer in Reading Passage 3?

*In boxes **1-5** 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. Studies show drugs available today can delay the process of growing old……

2. There is scientific evidence that eating fewer calorics may extend human life……

3. Not many people arc likely to find a caloric-restricted diet attractive…….

4. Diet-related diseases arc common in older people……..

5. In experiments, rats who ate what they wanted led shorter lives than rats on a low-calorie diet……..

Questions 6-10

Classify the following descriptions as relating to:

A *caloric-restricted monkeys*

B *control monkeys*

C *neither caloric-restricted monkeys nor control monkeys*

*Write the correct letter, **A, B or C**, in boxes **6-10** on your answer sheet.*

6. Monkeys were less likely to become diabetic. …….

7. Monkeys experienced more chronic disease…….

8. Monkeys have been shown to experience a longer than average life span…….

9. Monkeys enjoyed a reduced chance of heart disease. ……

10. Monkeys produced greater quantities of insulin……..

Questions 11-13

Complete the flow-chart below.

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

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

How a caloric-restriction mimetic works

CR mimetic

↓

less **11. ……** is processed

↓

production of ATP is decreased

↙ ↘

Theory 1:	Theory 2:
cells less damaged by disease because	cells focus on **13.** ……..
fewer **12**…… … are emitted	because food is in short supply

READING III:

Computer Games for Preschoolers:

Nintendo's Research and Design Process

Designing computer games for young children is a daunting task for game producers, who, for a long time, have concentrated on more "hard core" game fans. This article chronicles the design process and research involved in creating Nintendo DS for preschool gamers.

After speaking with our producers who have a keen interest in designing for the DS, we finally agreed on three key goals for our project. First, to understand the range of physical and cognitive abilities of preschoolers in the context of handheld system game play; second, to understand how preschool gamers interact with the DS, specifically how they control the different forms of play and game mechanics offered by the games presently on the market for

this platform; third, to understand the expectation of preschooler's parents concerning the handheld systems as well as the purchase and play contexts within which game play occurs. The team of research decided that in-home ethnographies with preschoolers and their families would yield comprehensive database with which to give our producers more information and insights, so we start by conducting 26 in-home ethnographies in three markets across the United States: an East coast urban/suburban area, a West coast urban/suburban area, and a Midwest suburban/rural area.

The subject is this study included 15 girls and 11 boys ranging from 3 years and 3 months old to 5 years and 11 months old. Also, because previous research had shown the effects of older siblings on game play (demonstrated, for example, by more advanced motor coordination when using a computer mouse), households were employed to have a combination of preschoolers with and without elder peers. In order to understand both "experienced" and "new" preschool users of the platform, we divided the sample so that 13 families owned at least one Nintendo DS and the others did not. For those households that did not own a DS, one was brought to the interview for the kid to play. This allowed us to see both the instinctive and intuitive movements of the new players (and of the more experienced players when playing new games), as well as the learned movements of the more experienced players. Each of those interviews took about 60 to 120 minutes and included the preschooler, at least one parent, and often siblings and another caregiver.

Three kinds of information were collected after each interview. From any older siblings and the parents that were available, we gathered data about: the buying decisions surrounding game systems in the household, the family's typical game play patterns, levels of parental moderation with regard to computer gaming, and the most favorite games play by family members. We could also understand the ideology of gaming in these homes because of these in-home interviews: what types of spaces were used for game play, how the system were installed, where the handheld play occurred in the house (as well as on-the-go play), and the number and type of games and game systems owned. The most important is, we gathered the game-playing information for every single kid.

Before carrying out the interviews, the research team had closely discussed with the in-house game producers to create a list of game mechanics and problems tied to preschoolers' motor and cognitive capabilities that were critical for them to understand prior to writing the games. These ranged from general dexterity issues related to game controllers to the effectiveness of in-game instructions to specific mechanics in current games that the producers were interested in implementing for future preschool titles. During the interviews, the moderator gave specific guidance to the preschooler through a series of games, so that he or she could observe the interaction and probe both the preschooler and his or her parents on feelings, attitudes, and frustrations that arose in the different circumstances.

If the subject in the experiment had previous exposure to the DS system, he or she was first asked to play his or her favorite game on the machine. This gave the researchers information about current level of gaming skill related to the complexity of the chosen one, allowing them to see the child playing a game with mechanics he or she was already familiar with. Across the 26 preschoolers, the Nintendo DS selections scope were very broad, including *New Super Mario Bros, Sonic Rush, Nintendogs,* and *Tony Hawk's Proving Ground.* The interview observed the child play, noting preferences for game mechanic and motor interactions with device as well as the complexity level each game mechanic was for the tested subject. The researchers asked all of the preschoolers to play with a specific game in consultation with our producers, *The Little Mermaid: Ariel's Undersea Adventure.* The game was chosen for two

major reasons. First, it was one of the few games on the market with characters that appeal to this young age group. Second, it incorporated a large variety of mechanics that highlighted the uniqueness of the DS platform, including using the microphone for blowing or singing.

The findings from this initial experiment were extensive. After reviewing the outcomes and discussing the implications for the game design with our internal game production team, we then outlined the designing needs and presented the findings to a firm specializing in game design. We worked closely with those experts to set the game design for the two preschool-targeted DS games under development on what we had gathered.

As the two DS games went into the development process, a formative research course of action was set up. Whenever we developed new game mechanics, we brought preschoolers into our in-house utility lab to test the mechanics and to evaluate both their simplicity, and whether they were engaging. We tested either alpha or beta versions of different elements of the game, in addition to looking at overarching game structure. Once a full version of the DS game was ready, we went back into the field test with a dozen preschoolers and their parents to make sure that each of the game elements worked for the children, and that the overall objective of the game was understandable and the process was enjoyable for players. We also collected parent's feedback on whether they thought the game is appropriate, engaging, and worth the purchase.

Questions 1-5

Complete the sentences below.

*Choose **ONE WORD ONLY** from the passage for each answer.*

*Write your answers in boxes **1-5** on your answer sheet.*

Exploratory Research Project

Main Objectives:

- Determine the relevant **1** ..... in the context
- Observe how preschoolers manage playing
- Investigate attitudes of **2** ..... towards games

Subjects:

- 26 children from different US **3**.....
- Age range: 3 years and 3 months to 5 years and 11 months
- Some children have older **4**.....
- Equal number of new and **5**..... players
- Some households have Nintendo DS and some don't

Length of Interview: 1-2 hours

Questions 6 - 10

Complete the flow-chart below.

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

*Write your answer in boxes **10-13** on your answer sheet.*

Using the results of the study

↓

Presentation of design requirements to a specialist **6**.....

↓

Testing the mechanics of two new games in the Nintendo lab (assess **7**.....

and **8.** .....)

↓

A **9**..... of the games trailed be twelve children

↓

Collection of **10**..... from parents