

英 語

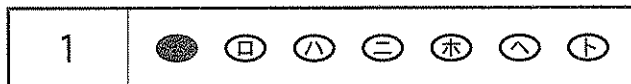
注 意

1. 問題は全部で 21 ページである。
2. 解答用紙に氏名・受験番号を忘れずに記入すること。(ただし、マーク・シートにはあらかじめ受験番号がプリントされている。)
3. 解答はすべて解答用紙に記入すること。
4. 解答用紙は必ず提出のこと。この問題冊子は提出する必要はない。

マーク・シート記入上の注意

1. 解答用紙はマーク・シートになっている。HBの黒鉛筆またはシャープペンシルを用いて記入すること。
2. 解答用紙にあらかじめプリントされた受験番号を確認すること。
3. 解答する記号・番号の○を塗りつぶしなさい。○で囲んだり×をつけたりしてはいけない。

解答記入例(解答がイのとき)



4. 一度記入したマークを消す場合は、消しゴムでよく消すこと。×をつけても消したことになる。
5. 解答用紙をよごしたり、折り曲げたりしないこと。

第1問 次の英文(1)~(10)の下線の意味に最も近いものを、それぞれ下の(A)~(D)のうちから1つ選びなさい。

(1) The assignment was to write a synopsis of our favorite novel.

- (A) evaluation
- (B) critique
- (C) dramatization
- (D) summary

(2) It is futile to go shopping when you don't have any money.

- (A) idiotic
- (B) useless
- (C) challenging
- (D) brilliant

(3) Tennis wear has become a very lucrative business for both manufacturers and tennis stars.

- (A) expansive
- (B) circumstantial
- (C) profitable
- (D) illiterate

(4) The elderly are not excluded from rent raises that all tenants have to pay when the landlord makes a major improvement.

- (A) obliged
- (B) eliminated
- (C) included
- (D) excited

- (5) The American car industry has been rejuvenated by its switch from large to small car production.
- (A) reinvigorated
 - (B) depressed
 - (C) rewarded
 - (D) rejected
- (6) I prefer muted colors in my living room.
- (A) changeable
 - (B) dull
 - (C) mauve
 - (D) bright
- (7) She had a cozy little apartment in Boston.
- (A) uncomfortable
 - (B) dirty
 - (C) lazy
 - (D) warm
- (8) He reads periodicals that are pertinent to his profession.
- (A) perceptive
 - (B) apparent
 - (C) appropriate
 - (D) expedient

(9) John and Mary worked on their garden with such zeal this summer that they grew more tomatoes than they could eat.

- (A) fertilizers
- (B) enthusiasm
- (C) garden tools
- (D) unwillingness

(10) Before Smith went on vacation, he left explicit instructions for the painting of his apartment.

- (A) colorful
- (B) clear
- (C) verbal
- (D) written

第2問 次の英文(11)~(25)のそれぞれの空欄に入れるのに最も適切なものを(A)~(D)のうちから一つ選びなさい。

- (11) The chemical properties of an atom are determined by _____ of electrons it contains.
- (A) the amount
 - (B) an amount
 - (C) the number
 - (D) numbers
- (12) Erosion has bitten _____ the folds that any sediments have long since been removed.
- (A) so deeply into
 - (B) that deeply into
 - (C) such deeply in
 - (D) that deep into
- (13) _____ we went into the forest, the more amazed we became at the proliferation of life forms under the thick canopy of leaves.
- (A) The deeper
 - (B) The depth
 - (C) The more deeper
 - (D) Deepening
- (14) Statistics is the study of facts _____ so as to present significant information about a given subject.
- (A) assembling and classifying
 - (B) are assembling and classifying
 - (C) assembled and classified
 - (D) assemble and classify

- (15) _____ Becquerel discovered radioactivity in 1896, he opened new vistas in every science.
- (A) How
 - (B) When
 - (C) Where
 - (D) What
- (16) William Baziotes is _____ created abstractions which sometimes took on archaeological connotations.
- (A) of several artists who
 - (B) one of several artists whose
 - (C) between several artists that
 - (D) one of several artists who
- (17) _____ the most internationally famous American artist, he is still relatively unknown inside the United States.
- (A) Probably Jackson Pollack is
 - (B) Since Jackson Pollack will probably be
 - (C) Because Jackson Pollack is probably
 - (D) Although Jackson Pollack is probably
- (18) Few insects live in regions where _____ extremely frigid temperatures.
- (A) are
 - (B) there are
 - (C) are there
 - (D) there

- (19) Susie would never have attended the meeting _____ that Margaret could not come.
- (A) had she known
 - (B) she had known
 - (C) did she know
 - (D) she did know
- (20) Norman Rockwell's illustrations, _____ more than five hundred, are of the highest renown.
- (A) total
 - (B) are totaled
 - (C) which total
 - (D) they total
- (21) Cash machines _____ for banks to dispense money 24 hours a day.
- (A) make it possible
 - (B) possibly make
 - (C) make possible
 - (D) that they make possible
- (22) _____ in the early stages of a headache, aspirin can be very effective.
- (A) To take
 - (B) Taking
 - (C) Take
 - (D) Taken

- 23) Until recently, _____ coyotes in states east of the Mississippi were rare.
- (A) to see
 - (B) sightings of
 - (C) seeing
 - (D) having seen
- 24) Members of at least seven families of fishes can generate electricity, including the electric eel, the knifefish, _____.
- (A) and so can the electric catfish
 - (B) and the electric catfish can
 - (C) and the electric catfish
 - (D) as well as the electric catfish can
- 25) An aquifer is a vast reservoir of groundwater _____ in level areas near mountains.
- (A) which collecting
 - (B) whose collects
 - (C) that collects
 - (D) whom collects

第3問 次の(A)~(D)に答えなさい。

(A) 次の英文を読んで小問(26)~(31)について、それぞれ最も適切なものを(A)~(D)の中から一つ選びなさい。

Just as sleepiness can interfere with good mental functioning, a good night's sleep can promote it—and not just because one is rested. Improvements in memory have been associated most closely with Rapid Eye Movement (REM) sleep and slow-wave sleep, and with memory for specific skills. For example, when people or animals learn a perceptual task and are allowed to get normal REM sleep, their memory for the task is better the next day, even when they have been awakened during non-REM periods. But when they receive less REM sleep, their memories are weakened. And when people learn a computerized task—hitting keys when they see a dot in different places on a screen—some of the same brain areas that are active during the task are active later during REM sleep.

If sleep enhances memory, it should also enhance problem solving, which relies on information stored in memory. German researchers recently showed that this is so. They gave volunteers a math test that required them to use two mathematical rules to generate one string of numbers from another and to deduce the final digit in the new sequence as quickly as possible. Unknown to the volunteers, a hidden shortcut would enable them to calculate the final digit almost immediately (the second number calculated was always the same as the final one in the new sequence). One group was trained in the evening and then got to snooze for eight hours before returning to the problem. Another group also got trained in the evening but then stayed awake for eight hours before coming back to the problem. A third group was trained in the morning and stayed awake all day, as they normally would, before taking the test. Those people who got the nighttime sleep were nearly three times likelier to discover the hidden shortcut as those in the other two groups. The scientist

who led this study attributed the insight-enhancing effects of sleep to the long-term storage of memories during deep (slow-wave) sleep, which occurs primarily during the first four hours of the night.

- (26) Which of the following titles is the most appropriate for this passage?
- (A) Research Methods for Sleep Experimentation
 - (B) The Effects of Inadequate Sleep on Health
 - (C) The Necessity of Sleep for Physical Training
 - (D) The Mental Benefits of Sleep
- (27) Which of the following statements about REM sleep is not mentioned?
- (A) It weakens a person's memory when it is deficient.
 - (B) It helps to strengthen a person's memory.
 - (C) It can improve a person's performance on perceptual tasks.
 - (D) It can cause people to wake up early from bad dreams.
- (28) According to the passage, what was the German researchers' main purpose in conducting the experiment?
- (A) to find out what constitutes a good sleep
 - (B) to ascertain if sleep improves problem solving skills
 - (C) to determine when the most ideal time of the day to sleep is
 - (D) to evaluate the difficulty of two math problems
- (29) Which of the following characteristics about the group training is true?
- (A) The first and third groups were trained in the evening.
 - (B) The second and third groups were trained in the morning.
 - (C) The first and second groups were allowed to sleep.
 - (D) The second and third groups were not allowed to sleep.

- (30) What was the main finding of the German research team's experiment?
- (A) The more tired a person is, the longer his or her REM sleep will be.
 - (B) Those people who were allowed to sleep at night outperformed the others.
 - (C) Deep sleep occurs only during the first four hours of sleep.
 - (D) Additional research was deemed necessary to confirm the data results.
- (31) The main reason to include paragraph 2 is to _____.
- (A) explain how to get a good night's sleep
 - (B) demonstrate to students how to do qualitative research
 - (C) present a contrary point of view to the researchers' argument
 - (D) validate the author's claims about the benefits of sleep

- (B) 次の英文を読んで小問(32)~(38)について、それぞれ最も適切なものを(A)~(D)の中から一つ選びなさい。

Wealthy landowners would commission garden designers to transform their large properties into gardens extending over many acres; the challenge for garden designers was to unify diverse elements—buildings, pools, monuments, plantings, natural land formations—into a coherent whole. At Versailles, André Le Nôtre imposed order upon the vast expanses of palace gardens and park by using broad, straight avenues radiating from a series of round focal points. He succeeded so thoroughly that his plan inspired generations of urban designers as well as landscape architects.

In Le Nôtre's hands, the palace terrain became an extraordinary work of art and a visual delight for its inhabitants. Neatly contained stretches of lawn and broad, straight vistas seemed to stretch to the horizon, while the formal gardens became an exercise in precise geometry. The Versailles gardens are classically harmonious in their symmetrical, geometric design but Baroque in their vast size and extension into the surrounding countryside, where the gardens thickened into woods cut by straight avenues.

The most formal gardens lay nearest the palace, and plantings became progressively less elaborate and larger in scale as the distance from the palace increased. Broad, intersecting paths separated reflecting pools and planting beds, which are called embroidered **parterres** for their colorful patterns of flowers outlined with trimmed hedges. Next, Le Nôtre included lawns, large fountains on terraces, and trees planted in thickets to conceal features such as an open-air ballroom and a colonnade. Statues carved by at least seventy sculptors also adorned the park. A mile-long canal, crossed by a second canal nearly as large, marked the main axis of the garden. Fourteen water-wheels brought the water from the river to supply the canals and the park's 1,400 fountains. Only the fountains near the palace played all day; the others were

turned on when the king approached.

At the north of the secondary canal, a smaller pavilion-palace, the Trianon, was built in 1669. To satisfy the king's love of flowers year-round, the gardens of the Trianon were bedded out with blooming plants shipped in by the navy from the south; even in midwinter, the king and his guests could stroll through a summer garden. The gardener is said to have had nearly 2 million flowerpots at his disposal. The fruit and vegetable garden that supplied the palace in 1677–83 is now the National School of Horticulture. In the eighteenth century, Louis XV added greenhouses and a botanical garden.

Another royal retreat, the Little Trianon, was added in 1761 and given in 1774 to Louis XVI's queen, Marie Antoinette. Reflecting a new delight in unspoiled nature, in 1785 a miniature village in a "natural" landscape was constructed there for the queen, where she and the ladies of the court relaxed by pretending to be shepherdesses and milkmaids. Flocks of sheep assisted this illusion.

- 32) Which of the following titles is the most appropriate for this passage?
- (A) The Palace Life of French Kings
 - (B) The Design of French Baroque Gardens
 - (C) A Brief History of Versailles
 - (D) Famous French Garden Designers
- 33) According to the passage, what was one of the biggest challenges for French garden designers?
- (A) finding enough people to assist them in the construction of gardens
 - (B) acquiring enough flowers and plants to satisfy wealthy landowners
 - (C) having adequate finances to build all the pools, monuments, and fountains
 - (D) unifying all of the diverse elements of the gardens into a coherent whole

- (34) What was the main reason for the success of André Le Nôtre as a designer of the Versailles gardens?
- (A) hiring many talented urban designers to assist him
 - (B) designing gardens with a lack of order and coherency
 - (C) using wide, straight paths radiating from a series of round focal points
 - (D) thoroughly discussing his plans with the king before starting
- (35) According to the passage, which feature of the Versailles gardens is considered to be the most classical?
- (A) its balanced symmetrical and geometric design
 - (B) its broad, straight vistas that appeared to stretch to the horizon
 - (C) its use of millions of flowerpots
 - (D) its enormous size and extension into the surrounding countryside
- (36) Which of the following statements about the Versailles gardens is false?
- (A) The much larger plantings were located farther away from the castle.
 - (B) The reflecting pools and planting beds were separated by narrow paths.
 - (C) The formal gardens were located closer to the palace.
 - (D) The parterres were outlined with neatly trimmed hedges
- (37) Which of the following statements about the Versailles gardens is true?
- (A) The park contained statues carved by more than seventy-five sculptors.
 - (B) Trees were planted to hide the open-air ballroom.
 - (C) All the water-wheels brought the water from the lake.
 - (D) Only the fountains located farthest from the palace were turned on all day.

- 38) The main goal of paragraph 4 is _____.
- (A) to describe how the Trianon was built
 - (B) to counter the argument presented in paragraph 3
 - (C) to explain how the king's love for flowers was satisfied
 - (D) to summarize all of the key points presented in the passage

- (C) 次の英文を読んで小問(39)~(44)について、それぞれ最も適切なものを(A)~(D)の中から一つ選びなさい。

An **earthquake** is a trembling or shaking of the ground caused by the sudden release of energy stored in the rocks beneath Earth's surface. Tectonic forces acting deep in the Earth may put a *stress* on the rock, which may bend or change in shape (*strain*). If you bend a stick of wood, your hands put a stress (the force per unit area) on the stick; its bending (a change in shape) is the strain.

Like a bending stick, rock can deform only so far before it breaks. When a rock breaks, waves of energy are released and sent out through the Earth. These are **seismic waves**, the waves of energy produced by an earthquake. It is the seismic waves that cause the ground to tremble and shake during an earthquake.

The sudden release of energy when rock breaks may cause one huge mass of rock to slide past another mass of rock into a different relative position. The break between the two rock masses is a *fault*. The classic explanation of why earthquakes take place is called the **elastic rebound theory**. It involves the sudden release of progressively stored strain in rocks, causing movement along a fault. Deep-seated internal forces (*tectonic forces*) act on a mass of rock over many decades. Initially, the rock bends but does not break. More and more energy is stored in the rock as the bending becomes more severe. Eventually, the energy stored in the rock exceeds the breaking strength of the rock, and the rock breaks suddenly, causing an earthquake. Two masses of rock move past one another along a fault. The movement may be vertical, horizontal, or both. The strain on the rock is released; the energy is expended by moving the rock into new positions and by creating seismic waves.

Recently, some modifications have been suggested for the elastic rebound theory. The classic model implies that existing faults are strong; a very large

stress must act to break rocks along a fault. The new idea is that faults are weak and only need a small stress to cause rupture and an earthquake. The evidence for the new idea is suggestive but not yet conclusive, so we currently have two models for fault behavior. The weak-fault model poses serious problems for earthquake prediction.

The fragile behavior of breaking rock is characteristic only of rocks near Earth's surface. Rocks at depth are subject to increased temperature and pressure, which tend to reduce breakability; hence, there is a limit to the depth at which faults can occur.

Most earthquakes are associated with movement on faults, but in some quakes, the connection with faulting may be difficult to establish. Four California quakes, including the 1994 Northridge quake, occurred on buried thrust faults, some of which were unknown and none of which involved surface displacement. Most earthquakes in the eastern United States are also not associated with surface displacement. Earthquakes also occur during explosive volcanic eruptions and as magma forcibly fills underground magma chambers prior to many eruptions; these quakes may not be associated with fault movement at all.

- (39) What is the most appropriate title for this passage?
- (A) The Predictive Nature of Earthquakes
 - (B) The Intensity of Earthquakes
 - (C) The Causes of Earthquakes
 - (D) The Devastating Effects of Earthquakes

- (40) Why is a stick used to explain how earthquakes occur?
- (A) A stick can put enormous stress on rocks and cause them to crack.
 - (B) A stick can harden and become like rock when it gets really old.
 - (C) It represents how energy puts stress on rocks and causes them to break.
 - (D) It illustrates how a big mass of rock slides past another mass of rock.
- (41) According to the passage, which of the following statements about the elastic rebound theory is true?
- (A) When the strain on a rock is released, the rock always bends but does not break.
 - (B) There is a gradual release of progressively stored strain in rocks, causing movement along a fault.
 - (C) The energy stored in the rock eventually surpasses the breaking strength of the rock, causing it to break.
 - (D) The movement of two masses of rock past one another along a fault is only vertical.
- (42) According to the passage, which of the following has been suggested to be added to the classic model of earthquake fault behavior?
- (A) There are more earthquake faults in the world than scientists originally thought.
 - (B) Faults are weak and require only a little stress in order to cause an earthquake.
 - (C) Faults occur at any depth, not just near the surface of the earth.
 - (D) Earthquakes are now easier to predict due to new software development.

- (43) In addition to fault movements, by what other means can an earthquake occur?
- (A) volcanic eruptions
 - (B) large-scale chemical explosions in plants
 - (C) nuclear activity in the Earth's core
 - (D) strong lunar gravity during a full moon
- (44) The word "it" in paragraph 3, line 4 refers to which of the following words?
- (A) energy
 - (B) fault
 - (C) strain
 - (D) elastic rebound theory

- (D) 次の英文を読んで小問(45)~(50)について、それぞれ最も適切なものを(A)~(D)の中から一つ選びなさい。

Energy foods are those that can be rapidly oxidized by the body to release energy and its by-product, heat. Carbohydrates, fats, and proteins provide energy for the human body, but carbohydrates are the primary source. They are the least expensive and most abundant of the energy nutrients. Foods rich in carbohydrates grow easily in most climates. They keep well and are generally easy to digest.

Carbohydrates provide the major source of energy for people all over the world. They provide approximately half the calories for people living in the United States. In some areas of the world, where fats and proteins are scarce and expensive, carbohydrates provide as much as 80 to 100% of calories. Carbohydrates are named for the chemical elements they are composed of — carbon, hydrogen, and oxygen.

Providing energy is the major function of carbohydrates. Each gram of carbohydrate provides 4 calories. The body needs to maintain a constant supply of energy. Therefore, it stores approximately half a day's supply of carbohydrate in the liver and muscles for use as needed. In this form, it is called glycogen.

Protein-sparing action is also an important function of carbohydrates. When enough carbohydrates (at least 50-100 g/day) are ingested to supply a person's energy needs, they spare proteins for their primary function of building and repairing body tissues.

Normal fat metabolism requires an adequate supply of carbohydrates. If there is too little carbohydrate to fulfill the energy requirement, an abnormally large amount of fat is metabolized to help meet it. During such an emergency need for energy, fat oxidation in the cells is not complete and substances called ketones are produced. Ketones are acids that accumulate in the blood

and urine, upsetting the acid-base balance. Such a condition is called ketoacidosis. It can result from IDDM (insulin-dependent diabetes mellitus), also known as type 1 diabetes, from starvation, or from extreme low-carbohydrate diets. It can lead to coma and even death.

When sufficient carbohydrates are eaten, the body is protected against ketones. This is sometimes called the antiketogenic effect of carbohydrates.

Providing fiber in the diet is another important function of carbohydrates. Dietary fiber is found in grains, vegetables, and fruits. Fiber creates a soft, bulky stool that moves quickly through the large intestine.

- (45) What is the main purpose of this passage?
- (A) to promote a healthy diet of eating only carbohydrates
 - (B) to provide a definition of carbohydrates
 - (C) to explain how calories are transformed into energy
 - (D) to clarify why people enjoy eating carbohydrates
- (46) According to the passage, which of the following statements about carbohydrates is true?
- (A) People store a full day's supply of carbohydrates in their liver and muscles.
 - (B) Carbohydrates provide the calories required by all living things.
 - (C) Many people find it difficult to properly digest carbohydrates.
 - (D) The key function of carbohydrates is to provide energy for the body.

- (47) According to the passage, why are carbohydrates a major source of energy for most people in the world?
- (A) They are more plentiful and cheaper than other types of food.
 - (B) They are easier to digest than all other types of food.
 - (C) They are less susceptible to bacteria than other types of food.
 - (D) They are easier to prepare and tastier than other types of food.
- (48) According to the passage, what happens to humans when they do not eat enough carbohydrates?
- (A) They will probably develop type 1 diabetes.
 - (B) They will produce ketones due to high cholesterol.
 - (C) They will metabolize fat to meet their need for energy.
 - (D) They will grow extremely tired and thirsty.
- (49) According to the passage, carbohydrates are beneficial to humans for each of the following reasons, except to _____.
- (A) help in the production of ketones
 - (B) assist the body to metabolize normal body fats
 - (C) save proteins to build and repair body tissues
 - (D) provide fiber in the diet
- (50) Which of the following publications is this passage most likely from?
- (A) research journal
 - (B) nutrition textbook
 - (C) fitness magazine
 - (D) medical manual

