绝密★启用前

194

2023年4月高等教育自学考试全国统一命题考试

英语科技文选

（课程代码　00836）

座位号_____

考场_____

准考证号_____

姓名_____

注意事项：

1．本试卷分为两部分，第一部分为选择题，第二部分为非选择题。

2．应考者必须按试题顺序在答题卡（纸）指定位置上作答，答在试卷上无效。

3．涂写部分、画图部分必须使用2B铅笔，书写部分必须使用黑色字迹签字笔。

第一部分　选择题

I．Directions: Read through the following passages. Choose the best answer and blacken the corresponding letter A, B, C or D on the ANSWER SHEET. (20%)

(A)

Energy in this world is divided into different categories. It can be stored or transferred from place to place or from object to object. One kind of energy that all moving things have is called kinetic energy. It is energy possessed by an object due to its motion. The word *kinetic* comes from an Ancient Greek word *kinesis* which translates to motion. Very large objects, like planets, and very small ones, like atoms, all contain kinetic energy because they are in motion. The heavier a thing is, and the faster it moves, the more kinetic energy it has.

There are two types of kinetic energy: transitional and rotational. Transitional kinetic energy depends on the motion through space, and an example would be a baseball pitcher throwing a ball. The ball contains the kinetic energy contained from the pitcher throwing the ball.

On the other hand, rotational kinetic energy depends on an object's motion that is centered on an axis, like the Earth's rotation on its axis. If an object's speed and mass are known, the amount of kinetic energy it contains can be calculated.

Instead of other measurement units, Joule is used for kinetic energy, and another unit for determining energy is known as the newton and is measured through a newton-meter.

The direction of a moving object does not matter when understanding kinetic energy. It can move horizontally, vertically, or diagonally. When the speed of an object doubles, the kinetic energy it has will increase four times. However, when the mass of the object doubles, the kinetic energy of the object also doubles.

Kinetic energy can also be transferred from one object to another. For example, when a baseball is thrown by the pitcher, and the bat hits the ball, the bat transfers its kinetic energy to the ball and the ball moves in a different direction, containing all the kinetic energy.

In another example, a roller coaster that is pulled in an uphill manner will gain potential kinetic energy. Once the coaster cars hit the top of the structure, it has the most potential kinetic energy. It begins moving down the other side of the hill and gains speed as well as kinetic energy. By the time the coaster cars hit the bottom, it has achieved most of its kinetic energy and is also at its point of least potential energy.

If an object is to gain or increase its kinetic energy, work must be done to the object, such as the pulling of the coaster cars or the bat hitting the ball. Most of the kinetic energy starts as a different type of energy, such as potential, and is then converted.

Finally, if two objects are moving at the same speed, the object with more mass will have more kinetic energy. For example, if a bike and a car were moving at the same speed, the car will have greater kinetic energy. The car would cause more damage if it collided with something versus the bicycle.

Another example is a car traveling at 60 mph has four times the kinetic energy of an identical car traveling at 30 mph. The car traveling at 60 mph has the potential for four times more death and destruction in the event of a crash.

1．The word "kinetic" in line 3, para.1, is closest in meaning to _____.

A．central　　B．basic

C．motive　　D．running

2．Which of the following statements is TRUE?

A．The smaller an object is, and the faster it moves, the more kinetic energy it has.

B．The heavier an object is, and the slower it moves, the more kinetic energy it has.

C．The heavier an object is, and the faster it moves, the less kinetic energy it has.

D．The heavier an object is, and the faster it moves, the more kinetic energy it has.

3. The one depending on an object's motion that is centered on an axis is _____.

A. transitional kinetic energy　　B. rotational kinetic energy

C. determining energy　　D. potential energy

4. Which of the following objects will have the most kinetic energy as they move at the same speed?

A. Bowling ball.　　B. Small marble.

C. Golf ball.　　D. Baseball.

5. Most of the kinetic energy in an object starts as which type of energy?

A. Determining energy.　　B. Mechanical energy.

C. Potential energy.　　D. Rotational energy.

(B)

The moon is Earth's satellite. A satellite orbits or goes around a larger object. The Moon's orbit is not a perfect circle. Sometimes it is farther away from Earth than at other times. Gravity pulls the Earth and the Moon close together. Gravity is a force which pulls objects together. The Moon's gravity is one-sixth that of Earth. A person or an object is pulled down to the surface of the Moon with only one-sixth the force.

The Moon is much smaller than the Earth. Its diameter is only about one quarter that of the Earth. Its diameter is 2,160 miles. A diameter is the distance from one side of a circle to the other. The distance from the Earth to the Moon is about 238, 855 miles. The average temperature on the Moon is -4 degrees Fahrenheit.

The Moon seems to change shape throughout the month. That happens because people only see the part of the Moon which the Sun lights up. The Earth travels around the Sun. The Moon travels around the Earth. When the Moon is between the Earth and the Sun, the Moon looks dark to Earth. The Sun is shining on its other side. The Moon spins on its axis once every 27 days. An axis is an imaginary line through the Moon from pole to pole.

The surface of the Moon is made up of rock and dust. The surface rock has been smashed into pieces by many meteorites. A meteorite is a rock which hits the Moon from space. Heating and cooling during the day and night also break up the rock. The surface never changes because new rock is never made as it is on Earth.

Craters on the Moon were formed by the crash of meteorites against it. The largest craters are called basins. They range in size from a few inches to hundreds of miles across.

Mountains thousands of feet high stand around the rim of these basins. Rilles are deep canyons made by flowing lava. Dark areas called maria (seas) were formed when giant craters were flooded by liquid rock leaking out from under the top layer of the Moon. There is no wind or rain on the Moon to move the dust around.

In ancient times astronomers recorded the movement and shape of the Moon. They wondered why it seemed to move across the sky. The ancient Greek astronomer Hipparchus was one of the first to think that the Moon was a sphere or globe. The telescope was invented in the 1600's. People could see much more of the Moon's surface using the telescope. Scientists have sent probes to the Moon to study it. Astronauts have landed on the moon several times.

A spacecraft being launched from the Earth needs a powerful rocket to lift it. It has to overcome Earth's gravity or it could be pulled back down to Earth. The spacecraft must protect the occupants from radiation from the Sun and space. It must keep them warm and provide air to breathe. It must land safely on the Moon and protect the astronauts from the tremendous heat while re-entering Earth's atmosphere.

6. Which of the following is a satellite?

A. A planet.　　B. A part of the Moon.

C. The Moon.　　D. The Earth.

7. How often does the Moon spin on its axis?

A. Every year.　　B. Every 52 days.

C. Every other month.　　D. Every 27 days.

8. We may know from the passage that the craters on the Moon were formed because _____.

A. areas on the Moon sank　　B. meteorites hit the Moon

C. of the basins　　D. of the maria

9. The word "sphere" in line 3, para.6, is closest in meaning to _____.

A. triangle shape　　B. rectangle shape

C. round shape　　D. arch shape

10. Why does a spacecraft need a powerful rocket to lift it?

A. The Earth's gravity is trying to pull it down.

B. It is filled with a lot of equipment.

C. The Moon's gravity is less.

D. The Moon is very far from the Earth.

第二部分　非选择题

II. Directions: Add the affix to each word according to the given Chinese, making changes when necessary. Write your answer on the ANSWER SHEET. (8%)

11. probable	可能性	12. suffice	足够的
13. fold	展开	14. play	相互作用
15. weigh	在(重要性等方面) 超过	16. biology	神经生物学
17. repeat	可重复性	18. simulator	模拟

III. Directions: Fill in the blanks, each using one of the given words or phrases below in its proper form and write your answer on the ANSWER SHEET. (12%)

on the go	as to	specialize in	in memory of
comply with	be bound up with	a host of	buoy up
suck up	expose to	a sense of	allow for

19. Scientists differ _____ whether the giant panda belongs to the bear or panda family.
20. Victims may be _____ poisonous or radioactive (放射性的) minerals.
21. _____ lesser problems also await solution .
22. He founded the charity _____ his late wife.
23. I've been _____ since eight o'clock this morning.
24. The extra lock on the door gave him _____ security.
25. A small segment of the urban society started to _____ nonagricultural tasks as a result of the city's role as a regional center.
26. The welfare of the individual _____ the welfare of the community.
27. _____ the train being late, we should be back by eleven.
28. The forests themselves _____ more than 1 billion tons of carbon every year.
29. We cannot _____ your demands for the files.
30. He was _____ by thinking he might manage to get married himself.

IV. Directions: Fill in each blank with a suitable word given below and write your answer on the ANSWER SHEET. (10%)

playing	focused	capable	how	take
as	remains	same	deal	challenges

AI is a young field, even its name, "artificial intelligence", was only coined in 1956. One of the 31 for AI has been to determine which tasks to study; what constitutes an "AI question" and 32 to evaluate the progress. Much early, AI research 33 on tasks commonly thought to require high intelligence in people, such as 34 high-quality chess. Skeptics viewed it 35 an impossible assignment, but AI made rapid progress. By the 1960s, programs were 36 of being the tournament(联赛) play. In 1997, in a landmark match, the chess system Deep Blue defeated Gary Kasparov, the world's human chess champion for the previous twelve years. At the 37 time, however, AI research was illuminating the enormous difficulty of common sense tasks that people 38 for granted, such as understanding stories or conversations. Developing programs that can 39 at a human level with rich everyday reasoning 40 a fundamental research challenge.

V. Directions: Translate the following sentences into English, each using one of the given words or phrases below. Write your answer on the ANSWER SHEET. (10%)

in relation to　adept at　be associated with　a wide range of　come to light

41. 这篇文章讨论了一系列广泛的论题。
42. 我的室友在设计机器人方面是个内行。
43. 这些症状尤其与流感相关。
44. 新的证据最近已披露出来。
45. 关于虚拟现实我有几点看法。

VI. Directions: Translate the following paragraph into Chinese. Write your answer on the ANSWER SHEET. (15%)

46. We live in a technological society. Almost every aspect of life in the modern world is influenced by your technological surroundings. Communications, transportation, manufacturing, mining and exploration, the service industries, medicine, agriculture—all are dominated by methods and apparatus which are the results of technological advances. The basis of technology is science. Without the fundamental discoveries and understanding provided by science, technology would be lacking direction and making little progress. One can argue that our society is beginning to suffer from too much technology, but we will never return to the primitive life of our forefather—technology is with us and it will remain with us.

VII. Directions: Read the following passage, and then fill in the table with the information based on the passage. Write your answer on the ANSWER SHEET. (10%)

Ocean acidification is a major climate change problem, concerning the change in acidic levels of the ocean. Many biological species are expected to be negatively affected by an increase in acidic levels.

Calcium carbonate minerals are responsible for building the skeletons and shells of many marine organisms. This means that areas in the ocean with a large organism count typically have a high concentration of calcium carbonate so organisms can calcify to build their shells and skeletons. However, ocean acidification reduces the concentration of calcium carbonate which impacts the ability of certain organisms to produce and maintain their shells or skeletons. Studies have shown that a more acidic environment has a dramatic effect on some calcifying species, including oysters, clams, sea urchins, shallow water corals, deep sea corals, and calcareous plankton. Acidification has also shown to significantly reduce the ability of reef-building corals to produce their skeletons, and some research shows that, by the end of the century, coral reefs may erode faster than they can rebuild. Future predictions estimate that the oceans will continue to keep absorbing carbon dioxide resulting in more acidic ocean water. Based on emission scenarios, estimates indicate by the end of the century the sea surface waters could be roughly 150% more acidic, which means a reduced pH that the oceans have not measured in more than 20 million years.

Over a billion people around the world get their main source of protein from the ocean, and hundreds of thousands of jobs are reliant on the well-being of ocean species. Therefore, from a human wellness standpoint alone, the acidification of the oceans is a major problem.

Ocean Acidification

The author of the passage attributes the problem of ocean acidification to 47 change.	The places where there are more 48 in the ocean tend to have more calcium carbonate.	Shells, skeletons, oysters, clams, sea urchins, etc. all have rich calcium carbonate 49.	According to the emission scenarios, the sea surface water has never been so 50 by the end of the century.	Scientists have warned that carbon dioxide the ocean takes in will 51 the level of ocean acidification.

VIII. Directions: Write a passage (150-200 words) in English on the following title. Develop the ideas according to the Chinese outline given below. Write your passage on the ANSWER SHEET. (15%)

52. Internet—Two-Edged Sword

(1) 网络给人们带来的益处；

(2) 网络给人们带来的负面影响；

(3) 你的看法。