

全国 2014 年 10 月高等教育自学考试

英语科技文选试题

课程代码:00836

请考生按规定用笔将所有试题的答案涂、写在答题纸上。

选择题部分

注意事项:

1. 答题前,考生务必将自己的考试课程名称、姓名、准考证号用黑色字迹的签字笔或钢笔填写在答题纸规定的位置上。
2. 每小题选出答案后,用 2B 铅笔把答题纸上对应题目的答案标号涂黑。如需改动,用橡皮擦干净后,再选涂其他答案标号。不能答在试题卷上。

**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)

Turnips, cress and basil could sprout on the moon in 2015 if NASA's first plan to grow plants on a world other than Earth comes to fruition.

The aim is to find out if the crews of moon bases will be able to grow some of their own greens, a capability that has proved psychologically comforting to research crews isolated in Antarctica and on the International Space Station, NASA says.

Factors that could confound lunar plant growth include the virtual absence of an atmosphere and high levels of solar and cosmic radiation that bombard the moon's surface. So the space agency is developing a sealed canister with five days' worth of air, in which seeds can germinate on nutrient-infused filter paper. The idea is that water will be released on touchdown and sunshine will do the rest.

Over five to 10 days, video cameras will record the plants' sprouting, their rate of growth and their ability to thrive in lunar radiation conditions. Footage will be shared with schools across the US, so that students supplied with their own copies of the canister will be able to compare lunar and terrestrial growth rates, a move that allows NASA to cut costs by crowdsourcing its control experiments.

The 1-kilogram "greenhouse" will be a paid-for stowaway on an uncrewed Google Lunar X-Prize lander mission – most probably the Moon Express mission planned for late 2015.

NASA's project builds on earlier work by Bernard Foing at the European Space Agency's research centre in Noordwijk, the Netherlands. Foing and his team demonstrated in 2008 that plants

can grow in crushed rock similar in composition to lunar regolith. While anti-contamination rules prevent attempts to grow plants on the exposed lunar surface, ESA's results mean that local dust could one day be brought indoors and used in moon gardens. He hopes that future missions might even find a way to test that idea.

"Following our successful tests on rock cress and marigolds, it will be interesting if some of these experiments try making use of local regolith as a growth medium," he says. In the long term, such pilot studies may be crucial to engineering the kind of plant-growth systems and greenhouses that will let moon colonists live off the land.

"This approach to use a sealed greenhouse is a pragmatic first step," says Foing. "It should open the way to lunar experiments that study the evolution and balance of microbial communities hosted by plants under the moon's extreme radiation conditions."

1. With which of the following subjects is the passage mainly concerned?
  - A. NASA's moon express mission.
  - B. Lunar plant growth
  - C. Moon gardens
  - D. Terrestrial plant growth
2. All of the following could make it impossible to grow plants on the moon EXCEPT \_\_\_\_\_.
  - A. solar radiation
  - B. the extreme solar radiation condition
  - C. the non-existence of an atmosphere
  - D. a sealed container
3. The word "footage" in line 2, para. 4 is closest in meaning to \_\_\_\_\_.
  - A. information
  - B. findings
  - C. film
  - D. experiences
4. Which of the following is NOT true about the NASA's plan?
  - A. It is intended to prove that people living in the moon bases can grow some green vegetables for themselves.
  - B. It is intended to find a way to test the idea that plants can grow in lunar regolith.
  - C. It involves crowdsourcing its control experiments.
  - D. It is based on NASA's findings.
5. According to the passage, Foing and his team's studies are extremely important to \_\_\_\_\_ in the future.
  - A. making it possible to grow plants in lunar regolith
  - B. making it possible to engineer plant-growth systems and greenhouses
  - C. making it possible for the moon residents to eat plants grown on the moon
  - D. making it possible for the residents on the moon to live far away from Earth

## (B)

Two new studies in mice show that some anti-cancer therapies work best when the microbes in our body are strong and healthy – which suggests that antibiotics and cancer might not always make a good combination.

We know that friendly, or commensal, bacteria can influence inflammation in the body, and that some forms of inflammation help cancers to grow – but it is unclear whether commensal bacteria have a direct influence on cancer development.

To find out, Laurence Zitvogel at the Gustave Roussy Institute in Villejuif, France, and her colleagues studied cyclophosphamide, a drug used to treat brain cancers and blood cancers including leukaemia. The drug works by encouraging the body to produce a certain type of immune T-cells that attack tumours.

Zitvogel's team gave the drug to mice with sarcomas – a rare cancer that develops in muscle, nerves and bones – and skin cancer. Within 48 hours, the cyclophosphamide had affected the lining of the small intestine, allowing some of the rodents' gut bacteria to escape and enter their lymph nodes and spleen.

Once there, it was these bacteria – not the drug itself – that encouraged immature immune cells in the lymph nodes to develop into the tumour-targeting T-cells.

For further evidence of the important role that the bacteria play, the researchers gave another group of mice antibiotics like vancomycin, which are known to disrupt gut bacteria, before they underwent the same cancer treatment. The cyclophosphamide was far less effective at combating cancer in these mice.

The results show that the link between bacteria and cancer needs much more careful study, says Cynthia Sears, who researches gut bacteria at Johns Hopkins University in Baltimore, Maryland. But it is far too early for people with cancer to throw out any antibiotics they are taking, she adds.

"Extending the results to humans requires deliberate study as antibiotics can be life-saving in the setting of cancer and chemotherapy," she says. "One key source of life-threatening bloodstream infections in this setting can be the gut bacteria."

Meanwhile, a second study suggests bacteria may play an important role in the activity of other anti-cancer drugs. Giorgio Trinchieri and Romina Goldszmid at the National Cancer Institute in Frederick, Maryland, and their colleagues looked at oxaliplatin, a platinum-based drug used in human chemotherapy. The drug triggers the production of reactive oxygen species – molecules that destroy DNA and kill certain kinds of cells, including cancer cells.

The team gave the drug to 50 mice with various types of cancer cells injected underneath their skin. Half of the mice had previously received an antibiotic cocktail – three weeks later, about 80 per cent of these mice had died. By contrast, 80 per cent of the mice that were antibiotic-free were still alive after three weeks.

6. What do the two studies imply, according to the passage?
- A. Friendly bacteria can influence inflammation in the body.
  - B. Inflammation can help cancers to grow.
  - C. Gut bacteria can help combat cancer.
  - D. Anti-cancer drugs can directly influence cancer development.
7. The word "friendly" in line 1, para. 2 is closest in meaning to \_\_\_\_\_.
- A. kind and pleasant
  - B. favorable
  - C. good
  - D. unharmed
8. Cyclophosphamide does not work well when the mice \_\_\_\_\_.
- A. become infected by disease germs
  - B. are given antibiotics
  - C. suffer from sarcomas
  - D. have skin cancer
9. What does Cynthia Sears think of Zitvogel and her team's study?
- A. It should extend to the treatment of cancer in humans.
  - B. For all the results of their study, the connection between bacteria and cancer is not certain.
  - C. The results of their study are unreliable because antibiotics are life-saving in the treatment of cancer.
  - D. Gut bacteria can spread life-threatening bloodstream infections.
10. Which of the following is NOT shown in Trinchieri and Goldszmid's study?
- A. Oxaliplatin can help kill cancer cells.
  - B. Bacteria may play an important role in the activity of some anti-cancer drugs.
  - C. Intestinal bacteria can help kill cancer cells.
  - D. A platinum-based drug can kill cancer cells.

## 非选择题部分

注意事项：

用黑色字迹的签字笔或钢笔将答案写在答题纸上，不能答在试题卷上。

**II. Directions: Add the affix to each word according to the given Chinese, making changes when necessary. (8%)**

11. accelerate                      加速装置
12. fiction                            虚构的

13. guarantee	保证人
14. quality	定性的
15. time	永恒的
16. verify	鉴定 (名词)
17. attractive	诱引剂
18. cell	细胞的

**III. Directions: Fill in the blanks, each using one of the given words or phrases below in its proper form.(12%)**

bump into	delve into	as for	exposure to
a spectrum of	bear out	within reach of	for the sake of
run out of	take on	be concerned with	comply with

19. The Commercial Press published \_\_\_\_\_ books on economics.
20. A taxi suddenly \_\_\_\_\_ us from the side.
21. The recently painted house \_\_\_\_\_ a new look.
22. We must \_\_\_\_\_ the reason why he didn't come to the meeting this morning.
23. He was suffering from \_\_\_\_\_ nuclear radiation.
24. \_\_\_\_\_ my past, I am not telling you anything.
25. We should give up smoking \_\_\_\_\_ health.
26. Workers were told to \_\_\_\_\_ safety regulations in the factory.
27. There is a supermarket \_\_\_\_\_ our house.
28. He is always \_\_\_\_\_ money before payday.
29. Evidence has failed to \_\_\_\_\_ this assumption.
30. Great art \_\_\_\_\_ moral teaching.

**IV. Directions: Fill in each blank with a suitable word given below. (10%)**

resulting between on create thanks generator in charge without high

The heat, which may result from sources such as solar heating or burning of fossil fuels, can be converted into electricity with a very \_31\_ efficiency through a process known as thermionic conversion. Due to the many advantages that would have a system of this type which would be

tradable \_32\_ a large scale, many efforts have been for more than half a century to try to develop a practical thermionic generator, with little luck \_33\_ all attempts. However, such luck may change soon, \_34\_ to a new design: an electronic thermal \_35\_. The thermionic generators used the difference in temperature \_36\_ a hot metal plate and a cold to \_37\_ electricity. Basically, it creates a difference in electrical \_38\_ between the hot plate and the cold. The \_39\_ voltage drives an electric current, \_40\_ the need for movement of mechanical parts.

**V. Directions: Translate the following sentences into English, each using one of the given words or phrases below. (10%)**

take into account      draw on      run for      be compatible with      in advance

41. 她决心今年再次竞选学生会主席。
42. 你能提前为我安排一辆出租车吗?
43. 但是这项研究并没有将其他诸如运输和冷藏之类的因素考虑进去。
44. 这位飞行员利用想象力和经验完成了这次艰难的飞行。
45. 人口增长应该与社会经济的发展相一致。

**VI. Directions: Translate the following paragraph into Chinese. (15%)**

46. All the matter, space, and the time there ever has been or ever will be popped into existence 10 to 20 billion years ago.

This tiny, supercompressed point — a “singularity” in the jargon of physicists — was unimaginably hot and packed with energy. It burst forth in a titanic explosion and, expanding and changing ever since, it has become the universe that we — and who knows who else? — call home? If some cosmologists are right, it’s the only universe there ever has been, but there’s no way of knowing for sure.

**VII. Directions: Read the following passage, and then fulfill the task with the information based on the passage. (10%)**

Energy sources may initially be divided into two kinds: non-renewable and renewable. The former group includes coal, oil, gas and, in the long run, nuclear; the latter water power, solar power and wind power. The energy from all these sources ultimately derives from the sun. There is a further source — geothermal — which depends on the earth’s own heart. In practice this may be classed as non-renewable as it is exploitable in only a few places and is limited. There is a second difference that is often made, between traditional and non-traditional energy sources. A traditional energy source is one which is at present widely exploited. It will be realized, broadly, that the traditional sources are the non-renewable ones. This is not entirely true, however, as a good deal of oil is locked up in solid form in rock and this source, though not renewable, is also non-traditional, since it has not so far been developed very much.

### Energy Sources

Renewable energy sources	Non-renewable energy sources	Feature of traditional energy sources	Feature of non-traditional energy sources	Energy source locked up in rock
47	48	49	50	51

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

#### 52. Shopping On Line

- (1) 现在越来越多的消费者喜欢在网上购物；
- (2) 但是也有许多消费者不喜欢网上购物；
- (3) 我对网上购物之优缺点的看法。