

全国 2015 年 4 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)

In the aftermath of a disaster like the massive typhoon Haiyan, which devastated the Philippines on 8 November, confusion often reigns and sketchy information abounds. This can leave responders unsure if their efforts are being put to the best effect.

A coordinated army of smart software and aerial drones could change that. By gathering information from across an affected area, software agents – algorithms that can work with a degree of autonomy – will build a picture of the situation and give recommendations for how people should direct their resources to mitigate damage and save lives.

The system, called Orchid, is being developed as part of a £10 million project of the same name funded by the UK government. Initial testing has shown promising results, and Rescue Global, a London-based disaster responder, is planning a field trial next year.

Orchid's software agents come in several flavours: they inhabit flying drones with on-board cameras, and servers that sift data coming in from the disaster area, like pictures, tweets or even sensor readings.

Each is programmed to watch for rapid changes to a situation. For example, if air quality sensors suggested that a chemical plant was leaking toxic gas, the sensors could send a signal to drones on a mapping project that could then fly to the scene, take further readings and shoot video from several different camera angles.

The information is then communicated wirelessly to an agent called a planner that assesses it and makes a suggestion to the person coordinating the aid effort on how to proceed.

"We are trying to fix the inefficiencies in deploying emergency responders that prevent proper prioritisation and scheduling of rescue tasks," says Sarvapali Ramchurn, a computer scientist at the University of Southampton in the UK, which leads a consortium of universities and companies working on the Orchid project.

In the wake of the magnitude 7 quake that devastated Port-au-Prince, Haiti, in January 2010, such a system could have been a huge help, says Ramchurn. "Roads were completely blocked and buildings were down so they had to remap the city to find the accessible zones for relief operations," he says. That was performed via crowdsourced reports to the Ushahidi website and use of Open Street Map – but it took 48 hours to complete. The Orchid team say software agents in charge of swarms of airborne drones could do that far quicker.

The agents are also designed to address a common problem in disasters: unreliable data. Distressed people in traumatic circumstances can supply inaccurate information. For instance, following the 2011 nuclear disaster at the Fukushima Daiichi power plant in Japan, people bought or built their own Geiger counters to track the spread of radiation. But many of the reported readings were implausibly high.

Orchid's information-gathering agents weed out reports that appear erroneous, quashing outlying high or low numbers in a dataset. In simulations of radioactive plumes that the team has run, this has worked well.

1. What is the passage primarily about?
  - A. Drones inhabited with smart software to plot disaster relief
  - B. Orchid's software
  - C. How to plot typhoon relief
  - D. Application of Orchid to plotting quake relief
2. It can be inferred from the passage that \_\_\_\_\_.
  - A. Orchid did a great deal in the relief operations at Port-au-Prince
  - B. Port-au-Prince suffered acutely from the earthquake
  - C. Orchid has some weaknesses in preventing prioritization of rescue tasks
  - D. Orchid's information-gathering agents have worked well in real situations
3. In which of the aspects does the Orchid system need improving?
  - A. Inefficiency
  - B. Addressing unreliable data
  - C. Proper prioritisation
  - D. Gathering information
4. The word "traumatic" in line 2, para. 9 is closest in meaning to \_\_\_\_\_.
  - A. powerful
  - B. terrible
  - C. troublesome
  - D. emotionally disturbing

5. Orchid's software agents can perform all the following tasks EXCEPT \_\_\_\_\_.
- A. dealing with inaccurate data
  - B. examining sensor readings
  - C. removing incorrect reports
  - D. coordinating the aid effort

(B)

To a casual observer of the latest round of United Nations climate talks in Warsaw, Poland, last week, it was a battle between Polish coal miners determined to hang on to their jobs, and the people of the Philippines, who would rather not lose their lives to the tempests likely unleashed by climate change.

In the corridors, the talks looked different: another stage in the agonizingly slow crawl towards a deal on carbon emission that diplomats hope to seal in 2015.

Little progress was made on most issues, but the two-week negotiations did end with an outline agreement that could one day allow people like the Filipino victims of the super-typhoon Haiyan to use science to sue coal-mining firms and power companies for compensation.

The deal was still being hammered out on Saturday – a day after the talks were due to close. After compromises from all sides, the negotiators agreed to set up an "international mechanism to provide most vulnerable populations with better protection against loss and damage caused by extreme weather". It was a tacit acceptance that the promises made by governments at the Earth Summit in Rio de Janeiro in 1992 to prevent "dangerous climate change" have failed. Dangerous climate change is now happening.

It is not yet clear how such an international mechanism will work. Rich nations remain deeply hostile to the idea of handing out compensation payments after disasters. But, with efforts to prevent escalating climate change making such slow progress, it could all end up in court with or without this mechanism in place.

Lawyers say nations hit by extreme weather might already have a case at the UN International Court of Justice in The Hague, the Netherlands, which resolves legal disputes between nations. For example, the court could attempt to charge rich nations with failing to honor their Earth Summit commitment.

Such cases would depend on researchers' increasing ability to attribute blame for specific disasters. Myles Allen and fellow climate modellers at the University of Oxford have shown that the European heatwave of 2003, which may have killed as many as 70,000 people, was made at least twice as likely by global warming. Researchers could well conclude that typhoon Haiyan has human fingerprints all over it. Especially since the most recent assessment of climate science from the Intergovernmental Panel on Climate Change (IPCC) found that warmer oceans are increasing the intensity of winds in tropical cyclones, while rising sea levels worsen storm surges.

Allen says legal culpability should start from 1990, the year governments signed off the first IPCC report about climate change. After that date, polluters cannot claim they were ignorant of the

consequences. Moreover, Allen says, by 2023, two-thirds of all the planet-warming emissions ever caused by humans will have happened since 1990.

6. What is the passage mainly concerned with?
  - A. Who should pay for climate change disasters
  - B. United Nations climate talks in Warsaw
  - C. Carbon emission
  - D. Dangerous climate change
7. Which of the following is NOT true about the latest round of United Nations climate conference in Warsaw?
  - A. It was stormy.
  - B. It was full of argument and conflict.
  - C. It concluded with an agreement to set up an international mechanism.
  - D. It was a battle between Polish coal miners and the people of the Philippines.
8. Paying compensation after disasters may involve all of the following EXCEPT \_\_\_\_\_.
  - A. polluters
  - B. victims' suit
  - C. the ability of the climate change researches to prove who was responsible for specific disasters
  - D. rich countries' commitment
9. The word "fingerprints" in line 5, para. 7 refers to \_\_\_\_\_.
  - A. marks
  - B. traces
  - C. factors
  - D. interference
10. What does Allen imply when he mentions the first IPCC report about climate change?
  - A. Winds in the tropical storm are becoming more and more intense.
  - B. Polluters cannot claim they did not know the consequences.
  - C. He is doubtful about the effectiveness of international agreements about climate changes.
  - D. Polluters should be responsible for their wrong doings.

## 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(es) to each word according to the given Chinese, making changes when necessary. (8%)**

- |                |         |
|----------------|---------|
| 11. artificial | 人工制品    |
| 12. custom     | 合乎风俗习惯的 |
| 13. reverse    | 不可逆转性   |
| 14. compass    | 包含      |
| 15. scan       | 扫描仪     |
| 16. spring     | 子孙; 后代  |
| 17. nourished  | 营养不良的   |
| 18. different  | 区分      |

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

reminiscent of	in advance	coincide with	draw on
be applicable to	compatible with	emanate from	wind up
account for	appeal to	turn out	in accordance with

19. It is cheaper if you book the tickets \_\_\_\_\_.
20. The factory \_\_\_\_\_ 900 cars a week last year.
21. The new system will be \_\_\_\_\_ existing equipment.
22. The way he laughed was strongly \_\_\_\_\_ his father.
23. The pilot \_\_\_\_\_ his imagination and experience to perform this difficult flight.
24. He \_\_\_\_\_ his speech with a quotation.
25. \_\_\_\_\_ your request, I am now sending you the price list.
26. Computer software \_\_\_\_\_ 90% of our products.
27. Her story \_\_\_\_\_ my father's personal experience in the past.
28. Much of the criticism against him \_\_\_\_\_ his political opponents.
29. Oil paintings did not \_\_\_\_\_ him.
30. These new government regulations \_\_\_\_\_ foreigners only.

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

by in grinding explained with out published since and occurred

For centuries people have observed strange phenomena before large earthquakes, such as light coming from ridges \_31\_ mountaintops. These reports were once dismissed by many scientists, \_32\_ part because they are often entangled in unscientific theories. For example, some who reported the lights thought they were produced \_33\_ UFOs. But the lights are not necessarily created by E.T. "Earthquake lights are a real phenomenon--they're not UFOs," researcher Robert Thériault told Nature. "They can be scientifically \_34\_." In study \_35\_ in the January/February issue of the journal Seismological Research Letters, Thériault and colleagues pulled together reliable sightings of these lights \_36\_ 1600, and found some strange similarities. A total of 63 \_37\_ of the 65 sightings \_38\_ along nearly vertical faults. The researchers suggest that along these faults, the stress of rocks \_39\_ against each other produces electrical charges, which can travel upward and interact \_40\_ the atmosphere to create light.

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

identical stand for for the sake of give off bring into play

41. 所有发热物体都发射红外线。
42. 为了健康和学习, 我们必须吃早餐。
43. 你应该把自己的才华发挥出来。
44. WHO 代表世界卫生组织。
45. 他的性格与他夫人相同。

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

46. I was told that while some denied the possibility of doing this and others were in doubt, there were none who maintained that it was actually possible. On the basis of the above I formulated the following very general problem for myself: Given any configuration of the river and the branches into which it may divide, as well as any number of bridges, determine whether or not it is possible to cross each bridge exactly once.

**VII. Read the following passage, and then fill in the table with the information based on the passage. (10%)**

The traditional method of food drying is to put it in places through which hot air is blown at temperature of about 110°C at entry to about 43°C at exit. This is the usual method for drying such things as vegetables, meat and fish. Liquids such as milk, coffee, tea, soups and eggs may be dried by pouring them over a heated horizontally round steel or by spraying them into a place through which hot air passes. Dried foods take up less room and weigh less than the same food packed in cans or frozen, and they do not need to be stored in special conditions. For these reasons they are invaluable to climbers, explorers and soldiers in battle, who have little storage space. They are also popular with housewives because it takes so little storage space. They are also popular with housewives because it takes so little time to cook them. Usually it is just a case of replacing the dried-out wetness with boiling water.

**Food Preserving**

Temperature at entry and at exit	Advantages of dried foods	To whom dried foods are invaluable	With whom dried foods are popular	Reasons housewives like dried foods
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. Fighting Fog and Haze

- (1) 雾霾已经成为困扰中国大城市的严重问题；
- (2) 雾霾形成的主要原因；
- (3) 我对解决雾霾的建议。