

一、詞彙：第 1 至 8 題，請選出最適當的一個選項填入空格中完成句子。

16%，每題 2 分

1. In the championship, everyone was surprised at his _____ performance which not only earned him the MVP but also helped his team win the game.
(A) famous (B) excellent (C) modern (D) bright
2. It is very dangerous to climb the mountain during winter because the path will be _____ with thick snow and you can't see clearly.
(A) arrived (B) repeated (C) shouted (D) covered
3. The _____ was angrily talking to Mark, whose dog always barked at him and even bit him when he was delivering letters.
(A) mailman (B) teenager (C) critic (D) physician
4. The people of this country will surely _____ for their homeland. They won't let anyone harm their family and the beloved ones.
(A) collect (B) fight (C) boil (D) ban
5. Every year, many tourists will come to this small town to join the _____, where they can enjoy the delicious food and joyful music.
(A) dictionary (B) program (C) excuse (D) festival
6. Tina found it _____ to work together with Mark, who never listened to her and always made decisions without any discussion with her.
(A) elegant (B) proud (C) difficult (D) precious
7. Somehow, all the _____ along the street were broken and went off. As a result, several car accidents happened and many got injured.
(A) camps (B) maps (C) lamps (D) stamps
8. Her parents were very happy for him because she _____ passed the test after having practiced the violin hard so many years.
(A) luckily (B) possibly (C) finally (D) commonly

二、文意選填：第 9 至 18 題，每題一個空格，請依文意從(A)到(BC)選項中，分別選出最適當者，使段落完整連貫，並將其英文字母代號標示在答案卡上。請注意，若選項代號為雙字母，兩個字母均須劃記；請忽略字首大小寫。30%，每題 3 分

(A) anymore	(B) on	(C) by	(D) fans
(E) excited	(AB) kill	(AC) living	(AD) enough
(AE) interesting	(BC) as		

Today, more and more people don't watch TV in their free time. Instead, they start to watch the clips or short films on YouTube as an entertainment. Besides, they might also watch the streaming of their favorite game players or Internet celebrities to 9 time. If you ask young people who is their favorite idol, the answer won't be the TV stars or the pop singers 10. In fact, those streamers and YouTubers are catching the eye of young people. Streaming and YouTube have become the things young people will spend their free time 11.

Although streamers and YouTubers are young people's idol, how do they make a 12? The truth is that not many of them are able to get enough money for their life. They can earn money only 13 having many viewers. They will receive more money when they have more viewers. Also, they can also earn money when helping sell products. Of course, their fans might also donate money to them. Basically, if streamers and YouTubers want to make money, they need to attract a lot of 14.

Hence, many streamers and YouTubers will do 15 things to attract viewers. However, some of them might go too far. They will use bad language in their streaming or films to make their viewers 16. Sometimes, they even do something wrong to attract people's attention. This is really a problem. Young people might start to use the language they are using and do the things they are doing 17 they are young people's idol.

Maybe, it is time to tell young people that they should be careful of what they are watching on the Internet. Not everything streamers and YouTubers say or do is correct. They should be smart 18 to tell what is wrong and right. The same, those steamers and YouTubers should be careful of what they are doing and saying.

三、閱讀測驗：第 19 題至第 36 題，每題請分別根據各篇文章之文意，選出最適當的一個選項，標示在答案卡上。54%，每題 3 分

(19-22 為題組)

A mouse and a frog were both friends and neighbors. Every morning the frog would hop out of his pond and go to the side of a tree, where his friend found a hole as his home. Then, he would return home at noon.

The mouse was very happy about his friend's visit every day. Yet, he was unaware that the friend was slowly turning into an enemy. Why? The frog felt really bad because though he visited the mouse every day, the mouse had never paid a visit to him. The frog started to think that the mouse wasn't a friend at all.

One day the frog felt he had been **humiliated** for too long. And he made a plan to make the mouse pay for what he had done. As usual, he visited the mouse. Then, he tied one end of a string around his own leg, tied the other end to the mouse's tail. At noon, he hopped out of the hole and dragged the helpless mouse behind him crying for help.

The frog dived deep into the pond. The mouse tried to free himself but couldn't, and soon drowned. His dead body floated to the top.

A hawk saw the mouse floating on the pond's surface. He swooped down, and grabbing the mouse in his talons, flew to the branch of a nearby tree. The frog, of course, was dragged out of the water too. He desperately tried to free himself, but couldn't and the hawk soon put an end to his struggles.

19. What is the second paragraph mainly about?

- (A) The friendship the mouse and the frog shared.
- (B) The danger when a hawk was around the two.
- (C) The plan the frog had made for his enemy.
- (D) The reason why the frog hated the mouse.

20. When your friend "**humiliated**" you as the frog thought in the third paragraph, how would you feel ?

- (A) stupid. (B) great. (C) unsure. (D) safe.

21. Which of the following is **TRUE** in this story?

- (A) The frog visited the mouse at noon every day.
- (B) The mouse was glad to have the frog as a friend.
- (C) The mouse knew the frog was an enemy in the beginning.
- (D) The frog, at the end, lived but the mouse was killed.

22. What can we learn from this story?

- (A) A friend in need is a friend indeed.

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(B) A man should take as companion one older than himself.

(C) Don't dig too deep a pit for your enemy, you may fall into it yourself.

(D) A friend to everybody is a friend to nobody.

(23-26 為題組)

A Density Experiment You Can Drink!

You will need:

- Juices that have different density levels. The density of a juice is often based on how much sugar or fruit is in it – more sugar or fruit will make the juice more dense. You will have to find juices that are colorful and give a nice display of density, and that's fun.
- A narrow glass (the more narrow it is, the easier it is to make the density levels)
- A dropper

What to do:

1. Before you begin, you can guess which juice you think will be more dense and imagine how the levels of your Drink of Density will look like. Check the ingredients, the sugar content, and the water content to help you out.
2. Next, you will need to find out which of your juices are the most and least dense. Pour one of your juices into the narrow glass. Fill a dropper with another juice and slowly drop it onto the inside of the glass so that it runs down the side of the glass. Watch the juice to see if it goes below or above the juice. If it simply mixes with the juice and does not go above or below, it has the same density as the juice.
3. Continue experimenting with other juices to determine which juices go to the bottom (more dense) and which ones go to the top (least dense.)
4. Once you have the densities determined, start over with a clean glass and use the dropper for each level to create your final Drink of Density!

How Does It Work?:

The density of liquids shows how many things (atoms, mass) are in the juice. In other words, if you have a cup with 200ml of water, and a cup with 200 ml of water that has lots of sugar in it, the cup of sugar water will be heavier even though they are the same 200ml. The sugar in the water makes it heavier (more dense.)

dropper 滴管 ingredient 成份

23. According to the article, which of the following will **NOT** change the density of juices?

- (A) Color.
- (B) Sugar.
- (C) Fruit.
- (D) Water.

24. According to the picture below, what is the correct density order of the three juices?



- (A) Pomegranate > Orange > White grape.
 - (B) Orange > White grape > Pomegranate.
 - (C) White grape > Orange > Pomegranate.
 - (D) Pomegranate > White grape > Orange.
25. If you drop one juice into another juice, it doesn't go above or below. What does this mean?
- (A) It has no density.
 - (B) It has less density.
 - (C) It has more density.
 - (D) It has the same density.
26. You have A, B, C juices. To find out the density order of them, you fill the glass with B juice, and you drop A and C juices onto it. Then, they both go below. Next, what should you do to find out the density order?
- (A) Drop B onto A.
 - (B) Drop A onto C.
 - (C) Drop B onto C.
 - (D) Nothing.

(27-31 為題組)

For years Katherine Johnson worked at NASA, doing math that saved lives. It took a long time for her work to get much attention. Now NASA has named two buildings for her.

She was born on August 26, 1918. Katherine Johnson's parents knew she was smart, but there weren't many chances for a young black girl to go to school back then. Yet, she was a strong student, finishing high school at age 14 and college at age 18. After college, Ms. Johnson studied even more math. In 1953, she found a job with a group that later became NASA. Sending things into space safely takes serious math. Everything in space, including Earth, is constantly moving. Everything also has gravity, which pulls on everything else. Space travel requires difficult calculations in these areas and many others.

Ms. Johnson was one of a group of African-American women who worked for NASA as "human computers". In the 1950s and 60s, NASA became more and more active in space. Ms. Johnson and the other "computers in skirts" were kept busy checking and double checking the math, making sure that NASA's space missions were successful. But the work of the women wasn't appreciated for a long time. Back then, NASA was run mainly by white men. Black people had to use separate bathrooms and work in separate areas. Ms. Johnson helped change this. Ms. Johnson's skills were soon well-known inside NASA. In 1961, she helped calculate the path for the flight of the first American to go into space.

Ms. Johnson worked for NASA for 35 years, earning five special awards during the years. In 2015, she was honored by President Barack Obama with a Presidential Medal of Freedom – the highest award the US can give to someone who isn't a soldier. To remember Ms. Johnson's work, NASA has named two important buildings for her.

In 2016, Ms. Johnson and other black women at NASA became the subject of a popular book called *Hidden Figures*. The book was turned into a hit movie, which helped spread the story.

27. According to the article, who has helped Katherine Johnson study math?

- (A) Herself.
- (B) Her parents.
- (C) NASA
- (D) Obama

28. In this article, why are the black women called "computers in skirts" mean?

- (A) They are good at computers.
- (B) They seem to be strong students.
- (C) They can do quick calculation.
- (D) They are active in space.

29. According to the article, what happened when Ms. Johnson got a job in NASA?
- (A) She got a Presidential Medal of Freedom.
 - (B) She and white people used the same bathrooms.
 - (C) She earned respect for what she was doing.
 - (D) She helped to send things into space.
30. According to the article, if you want to know more about Ms. Johnson, which of the following can help you?
- (A) The computers of NASA.
 - (B) The movie, *Hidden Figures*.
 - (C) The space base in Africa.
 - (D) Obama's presidential office.
31. When did Ms. Johnson finish college?
- (A) 1961
 - (B) 1936
 - (C) 1963
 - (D) 1950

(32-36 為題組)

Although they are very small, ants are truly incredible insects. The tiny creatures can survive floods by joining together to change into living rafts. They can know when an earthquake is going to happen. They can lift up to 20 times their body weight, and even select the best tool to complete a job efficiently. Now, the Dracula ant (*Myrmica camillae*) can snap its jaws shut at an unbelievable speed of 90 meters per second (more than 200 miles per hour) – the fastest-known animal movement on record.

“They’re moving around underground and if they meet their prey like a caterpillar or centipede they can smack it with the fast mandibles to kill or stun it,” said Andrew Suarez, an animal biology professor at the University of Illinois, who led the study. “They can also sting it to further stop it from escaping, and then they carry it back to the nest.”

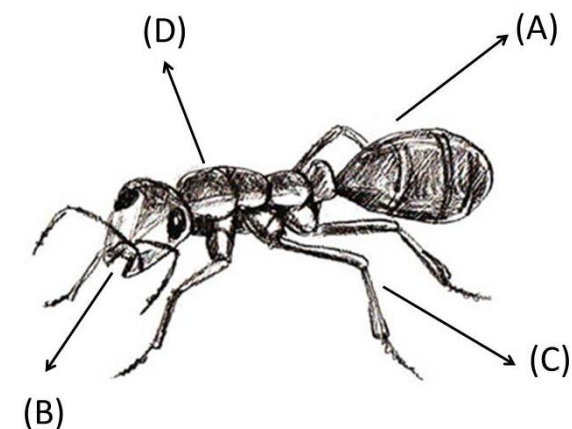
Living in the tropics of Africa, Asia, and Australia, Dracula ants spend much of their time underground or on tree trunks, making them hard to study. The insects get their name due to their strange feeding habits. The adult ants, unable to process solid food, feed their prey to their larvae or babies. They then chew holes in the larvae and suck the blood just like the vampire, Dracula.

Suarez caught a few of the ants in Borneo in 2014 and bring them to the University of

Illinois for a detailed study. However, when he tried to observe the ants using the lab's cameras, he realized they were not powerful enough to capture the swift action of the ants' mandibles. The ants were so fast that he could not slow their motion down with the cameras he had. So, Suarez made his way to Duke University in North Carolina, trying to capture the speed of the ants' jaws using the institution's high-speed camera, which can record up to one million frames per second, ten times faster than the one in Illinois. The team also used X-ray imaging to capture the movement in 3D.

The results of the study, published in the journal *Royal Society Open Science* on November 13, 2018, revealed that the tiny insect's jaw speed are three times faster than that of the previous record holder, the trap-jaw ant.

32. According to the article, which of the following is **NOT** true about ants?
- (A) Adult ants can't eat solid food because their jaws are not strong.
 - (B) Dracula ants can be found in the tropical area of Africa and Australia.
 - (C) When floods happen, ants can gather together to float on water.
 - (D) Dracula ants can often be found underground or on tree trunks.
33. How fast can the cameras in the University of Illinois record?
- (A) One million frames per second.
 - (B) Ten thousand frames per second
 - (C) Three million frames per second.
 - (D) A hundred thousand frames per second.
34. When we are talking about the mandibles of ants, which body part of ants are we talking about?



35. Which of the following is the reason why Dracula ants are given the name?
- (A) The time they spend underground.
 - (B) The regions they build their nest.
 - (C) The way they feed themselves.
 - (D) The tools they select to use
36. From which of the following can you learn more about the study on Dracula ants?
- (A) Duke University.
 - (B) *Royal Society Open Science*.
 - (C) The University of Illinois.
 - (D) *Mystrium camillae*.

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