

國立彰化高級中學 114 學年度科學班甄選入學
科學能力檢定 【英文科】 試題卷

一、字彙選擇（10%，每題 1 分）

1. After saving money for months, Alice could finally _____ to buy the bicycle she had always wanted.
(A) afford (B) enable (C) reform (D) expand
2. The candidate left a good _____ on the public by listening to everyone's concerns carefully.
(A) reduction (B) connection (C) observation (D) impression
3. Mandy is a deeply _____ person. She goes to church every Sunday.
(A) organic (B) conscious (C) scientific (D) religious
4. The artist painted the sunset with such _____ colors that it looked almost real.
(A) vivid (B) practical (C) steady (D) trendy
5. Unfortunately, the fake news completely _____ the politician's public image and people's trust in him.
(A) healed (B) destroyed (C) collected (D) widened
6. Besides being an excellent _____, Ian always showed good sportsmanship and encouraged his teammates.
(A) magician (B) suspect (C) athlete (D) civilian
7. After running up the hill, he stopped and _____ deeply to catch his breath.
(A) dared (B) labeled (C) breathed (D) hired
8. The village is so _____ that it takes three hours by boat to reach the nearest town.
(A) remote (B) wealthy (C) fancy (D) superior

9. The strange passenger was _____ in a long overcoat. The only parts of him I could see were his head and shoes.
(A) wrapped (B) folded (C) quoted (D) spoiled
10. George accidentally _____ his ankle while playing basketball, so he had to sit out the game.
(A) bumped (B) leaped (C) twisted (D) wove

二、綜合測驗（10%，每題 1 分）

第 11 至 15 題為題組

Cuttlefish are known to shoot ink at predators to escape them. However, recent studies 11 that they also use ink to attract mates. Scientists in Japan studied a certain type of cuttlefish and found that the males 12 females by touching them with two special tentacles. While they did this, the males also released ink into the water. 13 there was enough ink in the water, the male cuttlefish spread it around. This made the water around them black. The male cuttlefish now look extra white 14 the new, dark background. The scientists believe that the males used this visual display to impress the females.

Some other scientists think that the ink may also have a special smell that attracts possible mates. Cuttlefish generally live in the deep sea. Here, it is very dark. 15, a special smell could be the perfect way for a cuttlefish to let other cuttlefish know that it is nearby. So, just as we put on cologne to make ourselves more attractive, cuttlefish use their ink!

11. (A) shown (B) shows (C) have shown (D) are shown
12. (A) courted (B) explored (C) produced (D) polluted
13. (A) Before (B) Not until (C) Once (D) Even though
14. (A) for (B) without (C) by (D) against
15. (A) However (B) Therefore (C) For example (D) That is

第 16 至 20 題為題組

Have you ever noticed the small bumps that appear on your skin when you feel cold or scared? Well, they are called goose bumps because they make our skin look like 16 of a goose.

Goose bumps occur when tiny muscles under our skin contract 17 cold temperatures or strong emotions. When the muscles contract, the attached hairs are raised, and goose bumps are formed. This response is 18, so we don't control it.

We get goose bumps because of our ancestors. For animals, puffing up their fur or feathers can help them survive since it makes them look bigger. This helps them scare off enemies. It also traps air to keep them warm. Our ancestors had lots of body hair, 19 this reflex was quite useful for them. Although modern humans have less hair, we still have the reflex 20 can be seen when we get goose bumps.

16. (A) that (B) those (C) one (D) ones
17. (A) in spite of (B) in search of (C) in addition to (D) in response to
18. (A) emotional (B) original (C) dramatic (D) automatic
19. (A) while (B) so (C) since (D) but
20. (A) which (B) , which (C) in which (D) , in which

三、文意選填（10%，每題 1 分，每字限用一次）

第 21 至 25 題為題組

Are banana peels really as slippery as they seem in cartoons? Well, the truth is that fresh banana peels aren't very slippery. The real danger 21 in the rotten ones. When pressure is 22 to banana peels, they produce a slippery gel-like substance, and older peels have more of the substance. The "gel" is found inside the fruit's cell walls. When the banana peel is 23 on, the cell walls are crushed, and the gel is released. The reason that slippery banana peels often feature in cartoons 24 back to when bananas were introduced to New York City in the

nineteenth century. At the time, there was no 25 garbage-disposal system, so people would throw their trash, including banana peels, onto sidewalks. As a result, people often slipped on the rotten peels.

(A) happening	(B) proper	(C) dates	(D) frequent
(AB) applied	(AC) lies	(AD) ripe	(BC) stepped

第 26 至 30 題為題組

Do you like avocados? It is known as a delicious, versatile fruit, which can be 26 on toast, made into a dip or blended into a drink. What's more, it is considered a superfood because its flesh is full of vitamins and healthy fat. Today, it is grown in tropical climates around the world, 27 Taiwan. Humans discovered the avocado in today's Mexico, around 10,000 years ago. There, the avocado was seen as a source of strength and fertility. It became known to the wider world after the Spanish arrived on the continent and began 28 avocados in the 16th century.

Currently, the largest market for avocados is the United States. The fruit was first planted in the US in 1833, but it was slow to 29 in the beginning. In the 21st century, when Mexican food became more fashionable in the US, the appetite for avocados finally took off. Now, Asia is the world's fastest growing avocado market. In Taiwan, for instance, the amount of land used for avocado growing has doubled over the last decade. Many people now eat avocados for health reasons because this fruit can keep blood sugar levels stable, and help the body 30 disease. So the more countries that go avocado mad, the better!

(A) take in	(B) fight off	(C) exporting	(D) included
(AB) catch on	(AC) spread	(AD) including	(BC) mixed

四、篇章結構（8%，每題 2 分）

第 31 至 34 題為題組

Extreme heat events are becoming more frequent all over the world, and it can have several surprising effects besides increased thirst. For example, under certain conditions, there's a risk that airplanes won't be able to lift off properly. 31 And airplane wings are not designed to operate in air that is below a certain density. Another effect is that the oceans will become cloudier. That's because extreme heat causes more rain to fall. 32 Moreover, many nuclear power plants pump in cooling water from nearby rivers to prevent their nuclear reactors from overheating. This process makes the water very hot. 33 As a result, the amount of power a nuclear power plant can produce will often be capped for the protection of the plants and animals living in these waters. 34 They may all seem unrelated to each other. However, they point to the same things—how deeply connected everything in this world is, and the dangers of unchecked climate change.

- (A) These are only a few of the many surprising effects of extreme heat.
- (B) It's because the hotter the air is, the less dense it becomes.
- (C) Such change is harmful to many types of plants and animals which can only live in waters of a certain temperature.
- (D) This creates larger, faster-moving rivers, which carry more dirt and silt with them into the oceans.

五、閱讀測驗（12%，每題 2 分）

第 35 至 37 題為題組

If you see someone lying face down in public, you might think they need immediate help. To many people, however, lying down is the most fun and exciting thing in the world. These people enjoy an activity called “planking,” also known as

the lying down game. The idea of this game is to lie face down in an unusual place. Then, someone takes a picture of this “planker” and posts it online. Plankers have lain down in front of famous sites, on cars, on roofs, and on many other things.

Planking may sound really silly or worse, but it's actually becoming quite popular. The game was created in Britain in 1994, and it seems to have spread all over the world, including Taiwan. Two Taiwanese girls have become Internet stars by “planking” in several locations around Taipei. They've done this in front of some of Taiwan's top tourist attractions, including the National Theater, as a way to promote travel to the country. And for their efforts, the girls have gained quite a few fans. They've even gone on TV to talk about how planking **isn't as ridiculous as it seems**.

35. What is the main idea of the passage?

- (A) Planking is a traditional game that originated in Taiwan.
- (B) Planking is a global trend that combines fun and creativity.
- (C) Planking is a dangerous activity that requires professional guidance.
- (D) Planking is a promotional tool used by tourist attractions worldwide.

36. According to the passage, what does planking **NOT** involve?

- (A) Lying face down.
- (B) Taking photographs.
- (C) Posting the results online.
- (D) Looking for a famous sight.

37. What does the phrase “**isn't as ridiculous as it seems**” at the end of the passage imply about the girls' perspective on planking?

- (A) They regret participating in planking.
- (B) They admit it is absurd but do it for fame.
- (C) They believe it is a misunderstood but valuable activity.
- (D) They think planking should be taken seriously as a sport.

第 38 至 40 題為題組

In the process of evolution, if you feel there is something different about the human body, it could be that the size of our brain is changing. Over the last 20,000 years, the average volume of the male human brain has shrunk from 1,500 cubic centimeters to 1,350. And the female brain has decreased by roughly the same proportion. This has happened in all parts of the world.

No one knows what led to this change, or why it happened. Could it be that we've been getting dumber for thousands of years? Some scientists support that theory. According to cognitive scientist David Geary, early humans were smarter because they had to be in order to survive. As societies emerged and people lived more closely with each other, they didn't need to depend on their own intelligence as much, because others could help them stay alive.

Not all experts agree that smaller brains equal less intelligence. In fact, some say the opposite is true. According to anthropologist John Hawks, our brains became smaller so that they would be more efficient. As a result, humans are smarter today than they used to be. Hawks indicates that big brains require more energy than smaller brains, so our brains evolved and became smaller. Now, our smaller brains operate more efficiently, using the least energy possible.

38. Based on anthropologist John Hawk's theory, which of the following statements is **TRUE**?

- (A) Human brains are actually becoming larger.
- (B) Big brains are not as efficient as smaller brains.
- (C) Modern humans are more stupid than their ancestors.
- (D) Animals with high intelligence tend to have small brains.

39. According to the article, if the average female human brain volume 20,000 years ago was 1,200 cubic centimeters, what would the average human brain volume of modern females be?

- (A) 800 cm³ (B) 960 cm³ (C) 1080 cm³ (D) 1200 cm³

40. What is the author's attitude toward the evolution of brain size?

- (A) The author remains neutral and presents different views.
- (B) The author doubts that brain size has changed much over time.
- (C) The author believes smaller brains are smarter and more efficient.
- (D) The author is concerned that smaller brains mean lower intelligence.