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(請填入甄選證號碼)

# 臺北市立第一女子高級中學

## 108學年度科學班甄選入學

### 語文能力檢定試題本

**請不要翻到次頁！**

**讀完本頁的說明，聽從監試委員的指示才開始作答！**

※請先確認你的答案卷、甄選證與座位號碼是否一致無誤。

測驗說明：

這是北一女中科學班甄選入學語文能力檢定試題本，內容包含國文與英語，提供答案卷2本，請分科作答。測驗時間從15：30到17：00，共90分鐘。作答開始與結束請聽從監試委員的指示。

注意事項：

1. 每節甄試說明時間內，提前翻閱題本、提前作答，經制止不從者，該節甄試科目不予計分。
2. 每節甄試正式開始後15分鐘起，遲到者不得入場。若強行入場，該節甄試科目不予計分。
3. 每節甄試正式開始30分鐘內，不得提早離場。若強行離場，不服糾正者，該節甄試科目不予計分。
4. 依試場規則規定，答案卷上不得書寫姓名座號，也不得作任何標記。故意汙損答案卷、損壞試題本，或在答案卷上、作答內容中顯示自己身分者，該節甄試科目不予計分。
5. 依試場規則規定，語文能力檢定作答時，務必使用藍、黑色墨水的筆，不得使用鉛筆。更正時，可以使用修正液（帶）。如有書寫不清或汙損等情事，致無法清晰呈現作答結果者，其責任由考生自負，不得提出異議。
6. 依試場規則規定，語文能力檢定作答時，不得要求增加答案卷作答。
7. 請於答案卷上作答，如需擬草稿，請使用試題本中之空白頁。

請聽到鐘（鈴）響起，於試題本右上角方格內填寫甄選證號碼，再翻頁作答



# 國文試題

請閱讀以下文字，按照題意要求，完成一篇作文。

【中央通訊社 2018/09/03 綜合外電報導】：

法國兒少今天開學後，上課偷傳訊息的情況應會成為過去式，因為全國中小學禁止在校園使用手機。這項禁令在法國掀起激烈辯論，正反雙方各執一詞。

法國 7 月通過立法，禁止全國中小學學生在校園使用手機、平板電腦、智慧型手錶。這是履行總統馬克宏（Emmanuel Macron）競選承諾。

學生年齡在 15 歲至 18 歲的高中也將在開學後，實施部分或全面禁令。

近九成 12 歲至 17 歲的法國青少年擁有手機。新法支持者表示，這項禁令將減少學生在課堂上分心、打擊霸凌行為，並鼓勵兒少在下課時間更常活動，同時希望手機禁令有助於限制兒童接觸暴力和色情內容傳播。

法國教育部長布朗凱（Jean-Michel Blanquer）稱這項立法是「符合 21 世紀的法律」，將改善法國 1200 萬學童的紀律問題。他在國會六月審議手機禁令時表示：「對未來科技抱持開放態度，並不代表我們必須接受它們所有用途。」但批評者將禁令視為公關噱頭，認為難以落實。

法國政府讓學校決定如何實施新法，並建議他們上課時將學生手機放在儲物櫃中，但並非每間學校都有設置儲物櫃。有調查顯示，早已自行宣布禁令的法國學校中，許多學生承認違反規定使用手機。

隨著父母日益擔心孩子黏在螢幕上的時間愈來愈多，全球各地的學校都在努力適應這類口袋大小裝置的興起。（譯者：侯文婷/核稿：盧映孜）

讀完以上材料，請就以下兩個立場：

（一）國中小校園應禁止使用手機

（二）國中小校園不應禁止使用手機

**選擇其中一個作為題目**，以自己的經驗或見聞為例，闡述你的主張與理由，撰寫一篇首尾完整的文章。（占 50 分）

試題結束



# 英語試題

作答提示:

請根據題組內容，在答案卷上用英文寫出正確、完整的答案(\*唯題組一第3題請以中文回答)。

## 題組一: 15分

What's the best way to weigh your own head? Cut it off and put it on the weighing scales? Are you sure? Once being cut off, the head has less than five seconds of consciousness left, so you wouldn't have much time to enjoy the results of your experiment.


How about resting your head on the bathroom scales? It's another idea, but the result may not be very correct: your neck would still be supporting some of the weight.

The simplest way is to stick your head in a bucket. The density of most people's heads is very close to **that** of water. Put a bucket in a large tray, fill it to the brim with water and then stick your head in it. Weigh the water that spills over into the tray and you will know how much your head roughly weighs.

Moreover, you can repeat the experiment with your whole body, using larger containers. You can then compare the amounts of water displaced by your head and your whole body. **Then, you can work out what fraction of your total body weight your head is.**

If you are not particularly bothered by accuracy and just want to get a rough number of your head weight, here is one. Research shows that the weight of an adult human head (without any hair on it) is between 4.5 and 5 kilograms.

It is said that a Greek mathematician discovered that you can measure the volume of objects by seeing how much water they displace. He found this out while he was sitting in his bath one day. He jumped out and ran to the streets without any clothes on, saying "Eureka!" loudly. (Greek for "I've found it!")

	consciousness 意識	density 密度	brim 邊緣
	displace 排出	accuracy 精確	Greek 希臘的
	volume 體積	mathematician 數學家	liquid 液體

1. The main purpose of this article is to introduce a(n) \_\_\_\_\_.
2. According to the passage, the ideal liquid to be used for measuring the weight of the head is \_\_\_\_\_.
3. Please translate the sentence into Chinese: "**Then, you can work out what fraction of your total body weight your head is.**"
4. What does **that** in the 3rd paragraph refer to?
5. We can infer from the last sentence that the mathematician may have felt very \_\_\_\_\_ at that moment.


## 題組二: 18 分

We waste more than a third of the food we produce. A group of Swedish graduate students wants to change that fact. They have come up with a way to use old fruits and vegetables. They are calling it FoPo Food Powder. It is made from fruits and vegetables. They are dried, powdered and shelf-stable. The powder can be dropped in relief efforts and be used after natural disasters. It can also be passed out in low-resource areas. That is where fresh food and refrigeration are hard to come by.

“We found out that one third of the food produced was going to waste while people in the world were starving. So, we could not back out,” says Kent Ngo, one of the students on the team. Ngo says they are not making something new. Powdered food has been around since the early days of astronauts. But they are rethinking the waste and distribution methods. One group of the students make up a development team. They reached out to farmers and sellers to get fruit. The other group are food scientists. They tested different ways of drying and powdering the food. They settled on spray-drying it. The process then includes grinding it up. Finally, the team looked at ways to distribute it next. That involved both commercial and government supported sites.

“Today a relief bag for disaster victims contains various foods, such as strawberry jam, peanut butter and peas in tomato sauce. We think that an easily transported pack of cheap dried food powder with high nutritional value would fit in perfectly,” Ngo says. Freeze-dried food keeps most of the nutritional benefits of raw food. It loses some vitamin and mineral mass in the drying process. But it is still a good way to get fiber and nutrients.

The team is also about to start working with the U.N.’s Initiative on Food Loss and Waste. They want to try to reach more people and countries that could benefit. They also want to widen their reach. So, they are working with commercial suppliers and also with manufacturers that want to use FoPo in their food products. Soon, customers may sprinkle it into food or drinks. Or they can use it in baking.

 refrigeration 冷藏	grind 研磨	victim 受難者
starving 飢餓的	astronaut 太空人	nutrient 營養素
distribution 分送	mineral 礦物質	

For questions 1~3, please circle true or false.

1. (T / F) FoPo Food Powder doesn't go bad easily and can be used to help disaster victims.
2. (T / F) Freeze-dried food has exactly the same nutritional values as raw food.
3. (T / F) One of the sources of the fruit the students used was from farmers.
4. How many groups did the students divide themselves into before working on the distribution method?
5. Which official organization are the students going to work with soon?
6. According to the 2<sup>nd</sup> paragraph, why didn't the Swedish students give up on developing FoPo Food Powder ?
7. Why are the Swedish graduate students working with commercial suppliers and food product manufacturers?

### 題組三: 17 分

Anyone who has watched the film *Blackfish* is able to tell you that being limited makes whales go crazy, but this doesn't just go for whales. In the wild, elephants walk up to 30 miles per day, while bears are active for up to 18 hours per day. Lions and tigers run and climb many miles per day searching for prey. When these animals are held in tiny cages or pens, they lose all things natural to them. Living without doing things natural to their species, animals are likely to develop a condition called "**zoochosis**". Animals begin to act strangely and even hurt themselves or others out of boredom and frustration.

Not only does keeping animals in the zoo harm the health of animals, but it also affects their safety. Animals in zoos all over the US have been poisoned, starved, or even denied basic medical care. Children often throw trash into the pens of animals, making them sick after trying to eat the waste. Besides the everyday suffering that these animals endure, in the face of a natural disaster, they cannot escape. After Hurricane Katrina, tens of thousands of aquatic animals at Audubon Aquarium of the Americas in New Orleans died after employees were forced to leave, and no one was left to take care of the locked-up creatures.

The most shocking piece of evidence showing that the animals in zoos are unhappy is the fact that many of the animals have been given antidepressants. From penguins to gorillas, the animals are so unhappy that zoos have to find some other ways to make the creatures appear happy to the public. That's right, humans aren't the only species to struggle with depression. Because zoos care more about making money than about the animals, fail to provide enough space, and allow the suffering of animals without doing anything, zoos should not be supported as they are today. Before planning your next trip to the zoo, think twice about what you are really paying for. Not just for your enjoyment, but for the animals to suffer for even longer. After you spend money on a trip to the zoo, the animals are the ones who pay the real price, not you.

📖 prey 獵物	endure 承受	aquatic 水生的
species 物種	evidence 證據	antidepressant 抗憂鬱藥物
creature 生物		

For questions 1~3, circle "T" for statements that are true and circle "F" for statements that are **NOT** true.

1. (T / F) Animals in cages or pens can still run or climb miles a day.
2. (T / F) Animals may hurt themselves or others when they feel upset.
3. (T / F) Animals in zoos can survive even without human protection.
4. Keeping animals in cages and pens may affect their \_\_\_\_\_.
5. According to the 3<sup>rd</sup> paragraph, both zoo animals and human beings are struggling with the problem of \_\_\_\_\_.
6. Why does "**zoochosis**" happen?
7. Please give **one** example of the sufferings that animals in the zoo are experiencing every day based on the passage.

試題結束