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(請填入甄選證號碼)

臺北市立第一女子高級中學

107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，按題意要求，完成一篇作文。

進入綠園之後，你被老師指派擔任校慶園遊會活動的「組長」，要在期限內負責完成工作任務，活動圓滿結束後可獲得圖書禮券作為獎勵。

目前有（甲）、（乙）兩方案供你評估選擇：

工作任務：校慶園遊會活動

（甲）方案

組長：一人擔任，由個人完全負責活動的策畫與決策，並參與部分執行工作

組員：二人，性格、能力未知。不參與策畫討論，只負責執行組長指派的工作任務

獎勵：由組長個人獨得，組長可決定是否給予組員獎勵

（乙）方案

組長：一人擔任，必須與二位組員共同策畫、決策與協調工作分配

組員：二人，性格、能力未知。共同參與策畫討論，並執行協調後的工作任務

獎勵：組長個人獨得 50%，兩位組員各得 25%

在生活中，領導者往往擔負著任務成功與否的重要角色，在上述情境中，你傾向選擇擔任哪一個方案的「組長」呢？你認為怎樣才是稱職的領導者呢？

請以「領導者」為題，作文一篇。內容須包含：分析在（甲）、（乙）兩方案中，領導者可能掌握的優勢與面對的問題，並說明你的選擇與理由。（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。


題組一：15 分

A research team studies how screens are making a bad change in children's sleep. They have found that when children spend more time looking at their computers or cell phones, they will go to bed later, have fewer hours of sleep, and do not have a good night's sleep.

The team has found why screens take away children's sleep. First, children often play cell phone and computer games, and **they** are too exciting. Second, the light from the cell phone and the computer can cause a change to the body. The body will make less melatonin, a thing that tells us it's time for sleep. Third, since screens get smaller and smaller, and more than 75% of young people have some kind of screen in their bedroom, it's very easy for them to secretly watch their favorite programs in the bed when they should be getting a good night's rest. Because of these reasons, children do not get enough sleep.

Another research team studies how long most elementary and high school students sleep. They have found that over 30% of elementary school children and more than 50% of both junior and senior high school students do not get the hours of sleep they should have. And this is a big problem. The team says that healthy sleep habits in childhood and high school years are important because they will make it less easy for young people to get fat or feel sad or angry and help young people to learn and understand better.

To solve the problem of long screen time, the research teams hope that parents can take TVs, cell phones, or computers away from their children's bedrooms and make rules for their children's bedtime. It's also important for parents to teach their children that sleep is needed to stay healthy.

 research 研究 screen 螢幕


1. What does the word “**they**” in the second paragraph mean?
2. What is the second paragraph mainly about?
3. According to the passage, what will happen if high school students don't have good sleep habits?
4. How many research teams are mentioned in the passage?
5. What advice does the research team give to parents whose children do not get enough sleep because of long screen time?

題組二: 17 分

Childhood obesity is a condition where too much body fat badly affects a child's health. It is one of the most serious public health problems of the 21st century. A study found that almost half of all the overweight children worldwide under five live in Asia and one quarter live in Africa. In fact, it has also become a major issue in Taiwan. Parents, teachers, and government officials are all very worried about this problem since childhood obesity can lead to many health problems. Because of the increasing number of overweight students, Department of Education of Taipei City Government decided to set up the "Sunshine Student Program." The goal of the program is to encourage students to exercise more and to eat less junk food.

One of the important parts of the program is the "6520" concept. This easy-to-remember number is used to remind students to exercise during the breaks among their six daily classes for five minutes at a time and to chew their food twenty times before they swallow it. Another important part of the program is that snacks and drinks that have 250 or more calories are banned from schools. The program recommends that schools should sell only healthy snacks to students, including one hundred percent fruit juice, sushi, and low-calorie bread.

The program is being called a success by many people, including some overweight junior high school students who have already lost weight because of it. With the help of the program, obesity may no longer be such a big problem for students in Taipei. Besides, this is good news for the rest of the students in Taiwan, since the success of the program means that similar programs might just be started in other schools around Taiwan.

 condition 情況 affect 影響 issue 議題 ban 禁止 recommend 建議 concept 觀念 mental 心理的
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1. What is the purpose of the "Sunshine Student Program"?
2. What percent of the overweight children in the world under five live in Africa?
3. What does "20" in the "6520" concept mean?
4. According to the "6520" concept, how long are students encouraged to exercise during the break between classes at school?
5. Why are juice, sushi and bread mentioned in the second paragraph?
6. Write "T" for statements that are true and "F" for statements that are **NOT** true.
 - (1) Obesity is a mental problem rather than a physical problem.
 - (2) No students have got help from the "Sunshine Student Program" yet.
 - (3) "65" in the "6520" concept is used to remind students to exercise regularly.
 - (4) There are more and more children and teenagers in Taiwan getting overweight.
 - (5) Similar programs to the "Sunshine Student Program" might be seen soon in places other than Taipei.

題組三: 18 分

Physics Magic Tricks

1. Sticky Rice

Get a clean jam jar. Fill to the top with rice. Hold the jar firmly with one hand and push a pencil right to the bottom. Pull the pencil up slowly but not all the way out. Then push it back down again. If the rice level starts to drop, top up the rice.

Eventually, the rice will compact around your pencil, and you will be able to lift the whole jar with the pencil. When **this** happens, the friction between the pencil and rice is so large that you cannot easily pull the pencil out!

2. Bend Water with Static Electricity

Blow up a balloon and rub it against your hair to build up a static charge. Do this for several minutes to really get a good charge. Then, turn a tap on—it should be on enough for a steady but slow stream of water to come out, not just drips. Bring the balloon close to the stream of water and observe what happens!

3. Super Bouncing

Do this one in open space like your backyard. Grab a tennis ball. Drop it on the floor and see how high it bounces. Now grab a basketball. Drop it on the floor and see how high it bounces. Now put the tennis ball on top of the basketball; support the basketball with one hand and the tennis ball with the other. Drop your two balls at exactly the same time. Now go and ask your next-door neighbor for your tennis ball back.

jar 罐子	compact 緊壓	friction 摩擦力
bend 彎曲	static charge 靜電	tap 水龍頭
steady 穩定的	drip 水滴	observe 觀察

1. What are needed to do Experiment 1?
2. What does the word “**this**” in Experiment 1 mean?
3. What will happen to the stream of water when you bring the balloon close to the water in Experiment 2?
4. What is the correct order of steps to perform Experiment 2?
 - (A) Turn on a tap.
 - (B) Blow up a balloon.
 - (C) Rub the balloon against your hair.
 - (D) Bring the balloon close to the water.
5. Why are you asked to go and ask your next-door neighbor for your tennis ball back in Experiment 3?
6. Draw a picture to show **a tennis ball on top of a basketball**.

試題結束

