

北北基高級中等學校

115 學年度學科能力測驗聯合模擬考試

英文考科

請於考試開始鈴響起，在答題卷簽名欄位以正楷簽全名

—作答注意事項—

考試範圍：第 1～3 冊

考試時間：100 分鐘

作答方式：

- 選擇題用 2B 鉛筆在「答題卷」上作答；更正時以橡皮擦擦拭，切勿使用修正帶（液）。
- 除題目另有規定外，非選擇題用筆尖較粗之黑色墨水的筆在「答題卷」上作答；更正時，可以使用修正帶（液）。
- 考生須依上述規定劃記或作答，若未依規定而導致答案難以辨識或評閱時，恐將影響成績。
- 答題卷每人一張，不得要求增補。

選擇題計分方式：

- 單選題：每題有 n 個選項，其中只有一個是正確或最適當的選項。各題答對者，得該題的分數；答錯、未作答或劃記多於一個選項者，該題以零分計算。
- 多選題：每題有 n 個選項，其中至少有一個是正確的選項。各題之選項獨立判定，所有選項均答對者，得該題全部的分數；答錯 k 個選項者，得該題 $\frac{n-2k}{n}$ 的分數；但得分低於零分或所有選項均未作答者，該題以零分計算。

祝考試順利



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第壹部分、選擇題（占 62 分）

一、詞彙題（占 10 分）

說明：第 1. 題至第 10. 題為單選題，每題 1 分。

1. As companies increasingly use artificial intelligence, improving overall operational _____ has become a top priority for global businesses.
(A) efficiency (B) imagination (C) restoration (D) popularity
2. Nowadays, many young content creators gain attention through the _____ of popular trends rather than producing original content.
(A) information (B) innovation (C) imitation (D) installation
3. Over the years, mental health awareness has grown and teachers have been encouraged to be more _____ toward stressed out students.
(A) carefree (B) immense (C) energetic (D) sympathetic
4. Many technological companies are designing more _____ devices that are easy to carry and use anywhere for digital nomad workers.
(A) relatable (B) marginal (C) valuable (D) portable
5. The lost child _____ managed to find his way home before dark.
(A) someday (B) somehow (C) somewhere (D) somewhat
6. After graduating from high school, Jane and her classmates gradually _____ apart and eventually lost contact.
(A) drifted (B) stretched (C) skipped (D) tore
7. For vegetarians, bean dishes are wonderful _____ to meat because they provide protein and other essential nutrients.
(A) departures (B) engagements (C) alternatives (D) occupations
8. Every year, after the trees lining both sides of the trail _____ their leaves, the trail is covered with leaves of different shades of brown.
(A) bury (B) expose (C) pursue (D) shed
9. This memorial is a place for people to _____ and pay respects to the soldiers who lost their lives in the civil war.
(A) track (B) reverse (C) mourn (D) assemble
10. The ethics committee is made up of _____ professionals that can distinguish right from wrong and make decisions that will benefit the general public.
(A) respectful (B) honorable (C) conscious (D) distinct

二、綜合測驗（占 10 分）

說明：第 11.題至第 20.題為單選題，每題 1 分。

第 11. 至 15. 題為題組

In 2025, one of the most frequently discussed buzzwords in media and cultural commentary was “parasocial.” The term 11. a one-sided relationship in which an individual develops an emotional connection to a public figure — such as a celebrity, live streamer, or podcast host — despite the fact that this figure has no personal awareness of their existence.

Parasocial relationships have become increasingly prevalent, largely because digital platforms enable audiences to interact with public figures more frequently and in a more informal manner than before. Through videos, livestreams, and social media posts, influencers often share their daily routines, personal challenges, and casual conversations. This type of content can make followers feel 12. they were witnessing authentic moments of someone’s life. Over time, such repeated exposure may foster a strong sense of 13., leading audiences to believe they truly “know” the person behind the screen. However, despite this perceived closeness, the relationship remains largely one-directional.

Parasocial relationships present both potential benefits and notable drawbacks. On the positive side, they can provide a source of entertainment, emotional comfort, and motivation. However, when individuals become overly dependent on these connections, they may start to 14. genuine social interactions or form distorted impressions of an influencer’s personality and lifestyle. 15., content creators may face persistent expectations to remain actively engaged with their audience, a demand that can gradually contribute to stress and eventual burnout.

- | | | | |
|---------------------|--------------------|-----------------|-------------------|
| 11. (A) approves of | (B) refers to | (C) consists of | (D) engages in |
| 12. (A) even if | (B) so that | (C) in case | (D) as though |
| 13. (A) loss | (B) inequality | (C) direction | (D) familiarity |
| 14. (A) explore | (B) neglect | (C) strengthen | (D) encourage |
| 15. (A) Otherwise | (B) That is to say | (C) Meanwhile | (D) In comparison |

第 16. 至 20. 題為題組

Often dubbed the “black gold” of materials, carbon fiber has revolutionized modern industry. 16. thin and strong crystalline threads, carbon fiber is renowned for its exceptional strength-to-weight ratio, making it ideal for high-performance applications.

One of its most critical uses is in the aerospace industry. Engineers use carbon fiber-based protective layers in aircraft wings. As carbon fiber can withstand extreme temperature fluctuations and resist corrosion, these layers 17. wings during demanding flight conditions. Moreover, its natural stiffness helps the wings maintain their shape under aerodynamic stress, thereby 18. both fuel efficiency and overall flight safety.

The benefits of carbon fiber, however, are not restricted to the skies. It has also made a significant impact on the ground. An example is the production of pickleball paddles. Unlike traditional wooden paddles, carbon fiber models provide a stiff surface that allows for better control. Players can swing faster with less physical 19., all thanks to the material’s lightweight nature.

Continually pushing the boundaries of what is scientifically possible, the material is proving to be a(n) 20. component in modern engineering. As manufacturing costs decrease, we can expect this versatile material to be integrated into more everyday products. Without a doubt, the success of carbon fiber stands as a powerful testament to human ingenuity and our search for a more efficient future.

- | | | | |
|----------------------------|-----------------|------------------|---------------------|
| 16. (A) In accordance with | (B) Composed of | (C) Derived from | (D) Responsible for |
| 17. (A) shield | (B) replace | (C) spread | (D) evaluate |
| 18. (A) enhances | (B) enhancing | (C) to enhance | (D) enhanced |
| 19. (A) balance | (B) contact | (C) treatment | (D) fatigue |
| 20. (A) official | (B) replaceable | (C) fundamental | (D) optional |

三、文意選填（占 10 分）

說明：第21.題至第30.題為單選題，每題 1 分。選項之大小寫不列入考量。

第 21. 至 30. 題為題組

The placebo effect is a fascinating psychological phenomenon. Scientists have observed a tendency for an individual's health to improve after they receive a treatment with no active medicinal properties. Clearly, this effect is not merely an illusion but a real physiological 21. that highlights the profound connection between our mental state and our bodily functions.

The core of this effect 22. the psychological concepts of expectation and classical conditioning, which work together to change how we feel. When an individual anticipates a positive result from a treatment, the brain functions as a(n) 23. pharmacy, releasing natural chemicals such as dopamine and endorphins that can reduce pain and improve mood. This suggests that the brain can actively initiate the healing process based on the information it receives. Furthermore, conditioning plays a vital role. If a person has 24. medical environments, such as clinics, with recovery in the past, these cues can automatically trigger a healing response in the body. Therefore, the placebo effect is a biological reaction initiated by psychological prompts, proving that our thoughts are deeply integrated with our physical health.

The applications of this principle extend far beyond the doctor's office and are frequently observed in daily life and various professional fields. In the world of sports, for instance, athletes who believe they are taking a supplement aiming to enhance their 25. — even if it is nothing but vitamin pills — often show increased endurance and focus due to a boost in confidence. Similarly, in the corporate world and marketing, consumer behavior is heavily influenced by “marketing placebos.” People often perceive expensive products as being more effective than cheaper ones, even when the 26. are identical, leading to higher levels of satisfaction. This concept is also used in clinical trials, where researchers use placebos in a control group to 27. that new types of medicines are truly effective rather than just benefiting from a patient's positive outlook. Whether it is a student feeling more 28. and awake after drinking decaffeinated coffee he or she believes is regular or a worker feeling more productive in a professional environment, these psychological perceptions shape our daily reality.

Indeed, the placebo effect 29. a powerful testament to the strength of human perception and the mind-body connection. By understanding how belief can shape physical reality, experts in medicine, sports, and business can design better environments to 30. human potential. It ultimately reminds us that our mental outlook and the expectations we hold are just as important to our success and well-being as the physical tools we use.

- (A) associated (B) maximize (C) serves as (D) performance (E) alert
(F) lies in (G) ensure (H) response (I) ingredients (J) internal

四、篇章結構（占 8 分）

說明：第31.題至第34.題為單選題，每題 2 分。

第 31. 至 34. 題為題組

Modern technology has made life more convenient and almost frictionless — and that might be the problem. We often unconsciously reach for our phones to scroll through social media feeds, watch videos, or receive all kinds of messages that keep popping up at any moment. It feels harmless enough. 31. What's more, we've started relying on technology not just for complex tasks but for even very basic ones, which reduces our willingness to tackle difficult challenges. We may unconsciously outsource our effort to machines, losing the ability to solve problems independently and tolerate difficulty. So, is “friction-maxxing” — adding intentional obstacles back into daily life and making things harder — the solution?

Humans instinctively choose the most efficient way to conserve energy and accomplish tasks. Yet studies show that devoting effort to overcoming difficulties can actually enhance our sense of engagement and create meaningful life experiences. 32. At its core, it involves introducing more “friction” into everyday tasks — making them demand more time, effort, or patience to complete. In daily life, people step out of their comfort zones and rediscover a sense of control and authenticity by cooking from scratch or making furniture by hand. 33.

The human brain operates on a “use it or lose it” principle and is highly plastic. To keep our neurons active, we must continuously engage them in high-intensity and effortful thinking tasks — this is also the goal of friction-maxxing. In other words, the more frequently we use or practice a skill, the stronger and more extensive the neural connections related to that skill become, and our mental abilities improve accordingly. 34. For example, people who depend too much on GPS may find that without technological assistance, their natural sense of direction has weakened. In short, though it is difficult to resist the convenience of technology, introducing some “friction” into daily life can help people become more intentional and experience greater satisfaction and reward.

- (A) In the workplace, friction includes face-to-face meetings, handwriting, and working without AI.
(B) Friction-maxxing, an emerging trend of 2026, aims to rebuild our tolerance for inconvenience.
(C) Coined by Kathryn Jezer-Morton, it values friction over instant pleasure for deeper satisfaction.
(D) However, constant information bombardment from screens is gradually eroding our overall happiness.
(E) In contrast, excessive technology use reduces cognitive stimulation and may cause mental decline.

五、閱讀測驗（占 24 分）

說明：第35.題至第46.題為單選題，每題 2 分。

第 35. 至 38. 題為題組

After the exam season, many students promise themselves they will sleep earlier, scroll less, and study more efficiently. Yet the next week, the same pattern returns: “just five minutes” becomes “an hour,” and concentration collapses. But this is not simply a moral failure. According to nudge theory, human choices are highly responsive to choice architecture, which refers to the specific way options are arranged, framed, and timed. Much like a mother elephant gently guiding her calf, a nudge acts as a small design change that predictably influences behavior while leaving people free to choose otherwise.

In our daily lives, nudges often appear as gentle support. A school cafeteria may place water and fruit at eye level, while keeping sugary drinks less visible; students can still buy them, but the healthier choice becomes easier. Similarly, public spaces often use visual cues, such as painting brightly colored footprints on the floor, to guide people toward taking the stairs instead of the elevator. Another powerful nudge is the “default option.” Making organ donation an automatic setting rather than a voluntary sign-up significantly increases participation, as people naturally stick to pre-set choices. In each case, the environment does part of the work that willpower usually fails to do under stress.

Social media, however, uses nudges for a different purpose: keeping users engaged. Infinite scroll eliminates the natural stopping point that would signal completion. Notifications often arrive at moments when users are likely to be bored or distracted, and daily check-in rewards frame absence as “breaking the habit,” which can trigger guilt and prompt return visits. Likes and algorithmic recommendations convert peer approval into a reward loop, pushing teens to check repeatedly in fear of missing out. Ultimately, the entire environment is carefully engineered to keep users engaged without any interruptions.

As adolescents are still developing impulse control and are highly sensitive to social evaluation, these designs can reshape attention into habit, leaving users completely unaware. The ethical question is not whether nudges work, but whose interests they promote and whether the process is transparent. A supportive nudge aligns with a student’s long-term goals and can be explained openly; a harmful one exploits anxiety and social pressure while pretending to be neutral. Media literacy, then, is not only about judging content but also about diagnosing design. Therefore, next time you disable nonessential notifications, set app limits, or redesign study space, you are not being “weak.” Instead, you are rebuilding choice architecture to make freedom a reality.

35. What is the main idea of this passage?

- (A) Media literacy should focus on fact-checking content rather than platform design.
- (B) Strengthening internal willpower remains the most reliable strategy for achieving academic success.
- (C) Nudges can be beneficial, but social media platforms show they are so risky that they should not be permitted.
- (D) Choice architecture is a double-edged sword that can either empower users’ goals or exploit their vulnerabilities.

36. Which scenario below would the author most likely categorize as a “supportive nudge”?
- (A) A social media platform hides “like” counts to reduce the pressure of social evaluation and peer approval.
 - (B) A cram school uses “fear of missing out” to encourage students to sign up for extra weekend sessions.
 - (C) A fast-food chain frames a large soda as the “default” option unless a customer explicitly asks for tap water for free.
 - (D) An app automatically locks users out of their phone for a set period unless they pay a small commitment fee for “breaking the habit.”
37. Why does the author discuss social media in the third paragraph?
- (A) To contrast supportive nudges with platform designs that keep users engaged.
 - (B) To explain why adolescents are biologically more vulnerable to digital distractions than adults.
 - (C) To demonstrate that algorithmic recommendations are the most effective way to improve media literacy.
 - (D) To argue that social media companies should be legally required to set healthier default options for adolescents.
38. Here is a sentence: “**Once the ‘stop sign’ disappears, continuing feels like the default, and quitting requires deliberate effort.**” At the end of which paragraph would this sentence fit best?
- (A) Paragraph 1.
 - (B) Paragraph 2.
 - (C) Paragraph 3.
 - (D) Paragraph 4.

第 39. 至 42. 題為題組

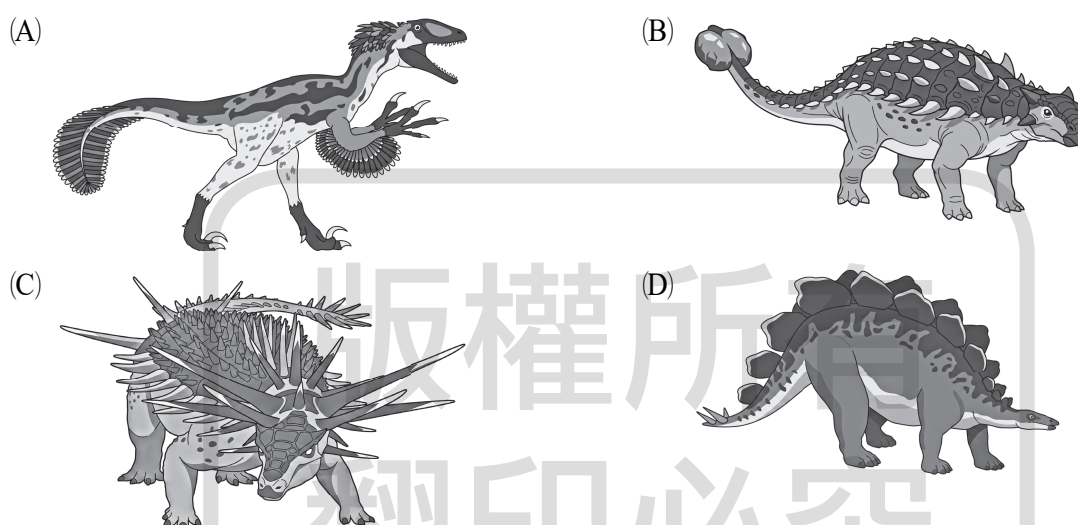
It all started with a partial rib bone of a dinosaur that was acquired by the Natural History Museum in London from a commercial dealer in 2019. In the following years, more fossils were excavated from Morocco’s Middle Atlas Mountains, which gave paleontologists a better picture of this unique dinosaur. They named it *Spicomellus* based on Latin, with “spicus” meaning “spiked” and “mellus” meaning “a collar put around dogs’ necks to protect them from wild animals in ancient times.” Being 13 feet in length and one to two tons in weight, *Spicomellus* belonged to a group of dinosaurs called ankylosaurs. They were slow-moving herbivores that walked on four legs during the Cretaceous Period. The discovery of *Spicomellus* pushed the origin of this group of dinosaurs 13 million years earlier to mid-Jurassic Period.

There are reasons why *Spicomellus* rocked the paleontology world. To begin with, ankylosaurs were thought to have roamed only in North America. The discovery of *Spicomellus* in Africa is the first piece of evidence that this group once resided on a different continent. What really blew paleontologists’ minds, however, was its appearance. Ankylosaurs featured tank-like bodies adorned with armor around their torsos. *Spicomellus*, the oldest of this group, turned out to have the most elaborate armor. In fact, its body was covered in spear-like pointy spikes from top to tail. One pair near the neck and another pair near its hip area were even as long as golf clubs. These spikes, whether long or short, were all directly connected to the spine rather than growing out of the skin, a feature unseen in any other species, extant or extinct.

Facing this jaw-droppingly weird dinosaur, paleontologists endeavored to hypothesize the use of its armor. The more prevailing consensus is that the spikes were more for display than for defense. They are speculated to have been used in courtship to attract mates, much like a deer's antlers or a peacock's tail. Otherwise, this set of armor could be quite impractical and even a hindrance when the dinosaur was moving through dense vegetation. "It's difficult to imagine how the meter-long spikes around the neck were used for defense. They seemed like enormous **overkill**," said vertebrate paleontologist Richard Butler of the University of Birmingham in England.

Right now, more work is carried out in Morocco and labs have been set up. Researchers hope that the fossils will help them gain more insight into this unusual prehistoric creature.

39. Which of the following is a Spicomellus?



40. According to the passage, what is the primary function of the armor of a Spicomellus?

- (A) To get the Spicomellus out of the forest.
- (B) To impress the Spicomellus' potential partners.
- (C) To fight against the Spicomellus' predators.
- (D) To protect the Spicomellus' surrounding vegetation.

41. Which of the following does NOT use emotional language to express how surprising Spicomellus is?

- (A) The discovery of Spicomellus pushed the origin of this group of dinosaurs 13 million years earlier to mid-Jurassic Period.
- (B) There are reasons why Spicomellus rocked the paleontology world.
- (C) What really blew paleontologists' minds, however, was its appearance.
- (D) Facing this jaw-droppingly weird dinosaur, paleontologists endeavored to hypothesize the use of its armor.

42. What does the word "**overkill**" in the third paragraph most likely mean?

- (A) Physical strength.
- (B) Violent destruction.
- (C) Unequal treatment.
- (D) Unnecessary excess.

第 43. 至 46. 題為題組

Whales are highly social marine mammals that rely heavily on sound to communicate. In the vast and often dark ocean environment, sound travels far more efficiently than light, making it the most effective medium for transmitting information. Consequently, whales use a range of acoustic signals to convey essential information related to navigation, social interaction, hunting, and reproduction.

Different whale species produce a wide range of sounds. Some whales create long and complex songs that can last for many minutes and travel across great distances. These songs often contain repeated patterns and may gradually change over time. Other species produce shorter sounds, such as clicks, whistles, and pulsed calls. Scientists believe these sounds may play an important role in attracting mates or communicating with other whales in the area. Certain whales, particularly toothed whales, also possess a remarkable ability called echolocation. By producing rapid clicking sounds and listening to the returning echoes, whales can detect objects in their surroundings. This allows them to estimate the distance, size, and movement of prey, such as fish or squid. Echolocation is especially useful in deep or **murky** waters where visibility is very limited.

However, the underwater sound environment has changed significantly due to human activities. Commercial shipping, oil exploration, and offshore construction have greatly increased the level of noise across large areas of the ocean. Many of these human-made sounds overlap with the frequencies used in whale calls, disrupting their ability to communicate. When the ocean becomes too noisy, whales may struggle to hear one another clearly, causing critical signals to be missed. Mothers and calves may lose contact, mating opportunities may decrease, and coordinated hunting may become less effective.

Over time, continuous noise exposure may cause whales to avoid certain habitats or migration routes. These behavioral changes could reduce feeding success and reproductive rates, which may eventually affect whale populations. Because of these risks, scientists and conservation groups are working to develop quieter technologies and establish regulations to reduce underwater noise in sensitive marine environments.

43. What question does the passage answer?

- (A) What makes sound travel faster and farther than light underwater?
- (B) Why do whales fail to pick up key messages during communication?
- (C) How do whales use different songs to change certain migration routes?
- (D) Since when have human activities significantly impacted whale populations?

44. What does the word “**murky**” in the second paragraph most likely mean?

- (A) Far and wide.
- (B) Warm and bright.
- (C) Dark and unclear.
- (D) Noisy and crowded.

45. Which of the following statements about echolocation is true according to the passage?

- (A) It involves random patterns of pulsed calls.
- (B) It helps reduce underwater noise pollution.
- (C) It enables lost whales to find their way home.
- (D) It allows whales to locate objects through sound waves.

46. How does the author conclude the passage in the last paragraph?

- (A) By summarizing the main ideas.
- (B) By introducing additional ecological concerns.
- (C) By describing ongoing efforts to address the problems.
- (D) By warning about the risks marine life may face in the future.

第貳部分、混合題（占 10 分）

說明：本部分共有 1 題組，每一子題配分標於題末。限在答題卷標示題號的作答區內作答，並以規定用筆作答。

第 47. 至 50. 題為題組

When it comes to smoking prevention, first-hand smoke is the inhalation of cigarette or vape smoke by smokers themselves, while second-hand smoke comes from smokers exhaling smoke or burning cigarettes and vapes. Thirdhand smoke (THS) is toxic contamination that remains in the environment after smoke disappears from the air. Harmful chemicals can stick to carpets, walls, furniture, toys, and clothes, putting children and pets at greater risk of cancer and autoimmune disorders. This is because children and pets are especially vulnerable due to the fact that they frequently crawl on floors, touch contaminated surfaces, and then put their hands or objects in their mouths.

So how do we prevent the problem of THS? Here are 5 ways to reduce the risks from thirdhand smoke (THS):

1. **Make Your Home Smoke-Free:**

The most important step is to completely ban smoking indoors. Since just opening windows cannot rule out the danger of THS, families must ensure a 100% smoke-free home.

2. **Avoid Smoking in Cars:**

THS easily sticks to seats and interior surfaces, so keep your car 100% smoke-free, especially if children are passengers.

3. **Clean and Replace Contaminated Items:**

- (1) Wash clothes, curtains, and bedding from time to time.
- (2) Clean walls, floors, and furniture.
- (3) Replace items that trap chemicals easily (e.g., carpets, cushions) if heavily contaminated.

4. **Wash Hands and Skin Frequently**

Frequent handwashing and bathing are recommended as they help keep the toxic substances at bay.

5. **Be Careful in Public or Shared Spaces**

Hotels, rental homes, or second-hand furniture may contain THS. Choose non-smoking environments whenever possible.

47. -48. 下列簡短敘述摘記上方文章重點。請從文章中找出兩個單詞，分別填入下列句子空格中，並視句型結構需要做適當的字形變化，使句子語意完整、語法正確，並符合全文文意。每格限填一個單詞（word）（填充題，4 分）

First-hand smoke is smoke 47. by smokers themselves, while second-hand smoke is smoke absorbed by non-smokers. Thirdhand smoke (THS), on the other hand is toxic contamination that remains in the environment after the 48. of smoke from the air.

49. Based on the passage, which following statements are true?（多選題，4 分）

- (A) Thirdhand smoke refers to the visible smoke that lingers in the air after a person stops smoking.
- (B) Children and pets are more vulnerable to THS because of their frequent contact with possibly contaminated surfaces.
- (C) Keeping windows open is a recommended way to significantly reduce the long-term buildup of THS.
- (D) THS can be found not only on household items like carpets but also on people's skin and clothes.
- (E) For carpets and cushions, regular washing is recommended as the best way to remove heavy toxic buildup.
- (F) When staying in a hotel or buying used furniture, people should be aware of potential THS exposure.
- (G) THS is mainly an indoor issue, so smoking in a car does not pose a threat once the windows are rolled down.
- (H) Frequent handwashing and bathing are recommended as they help reduce the toxic substances on the body.

50. Which phrase in the passage means “to remove the possibility of something”?（簡答題，2 分）

第參部分、非選擇題（占 28 分）

說明：本部分共有二大題，請依各題指示作答。答案必須寫在「答題卷」標示題號之作答區內，作答時不必抄題。

一、中譯英（占 8 分）

說明：依題號將以下中文句子譯成正確、通順、達意的英文。每題 4 分，共 8 分。

1. 線上學習平台提供了豐富的資源，讓學生可以根據自己的步調學習，而不再受限於地理位置。
2. 除了節省了通勤時間以外，這種學習方式也讓偏遠地區的人們有機會接受高品質的教育。

二、英文作文（占 20 分）

說明：請仔細觀察圖片，並依提示寫一篇英文作文，文長至少 120 個單詞（words）。

提示：有些「從做中學」（Learning by Doing）的活動，能讓學生從具體參與經驗和實作中，思考、深化並應用學習成果。下列有三種學習活動，請寫一篇英文作文，文分兩段，第一段請根據圖片內容，描述一個圖片裡的人事物及活動。第二段說明你最想參加哪個活動並說明理由。



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