

國立南科國際實驗高級中學 113 學年度第 1 次教師甄選 題目卷

科目：雙語部 國中教育階段國語文專長科 英文試卷

測驗說明：

1. 本試題分三部分：單選題、翻譯題與申論題。
2. 請依題型及題號依序於答案卷上作答，並清楚標示題號，不需抄題。
3. 試題共四頁，總共 100 分，分數配置詳見各題。

第一大題、單選題(每題 4 分，共 40 分)

Forget forget-me-nots, the key to memory might be confusion! Yale researchers have cracked open the dusty treasure chest of human memory, and guess what they found? We apparently love a good mystery. Their study, published in *Nature Human Behavior*, suggests our brains prioritize remembering things that leave us scratching our heads. "Think of it like this," says Ilker Yildirim, the study's lead author, "if something is predictable and totally snooze-worthy, your brain might just **tune it out**." Imagine a fire hydrant chilling in the middle of a forest. Totally unexpected, right? That little splash of confusion, according to the study, is exactly what makes it more likely you'll remember that bizarre scene.

So how did the researchers arrive at this memory mantra? They built a fancy computer model that mimicked how our brains compress and then reconstruct visual information. Basically, it's like your brain taking a snapshot of a scene, shrinking it down for storage, and then trying to rebuild the picture later. The model then teamed up with a human experiment. Participants were shown a rapid-fire sequence of ordinary pictures, and then grilled on whether they remembered specific ones. The results? The weirder the image was for the computer model to reconstruct (think fire hydrant in the forest again), the more likely it was that the human participants remembered it.

"It's almost like our brains are natural-born detectives," chuckled John Lafferty, another researcher on the project. They even used this whole memory mess to create a new set of experiments, hoping to shed light on how artificial intelligence perceives the world. The ultimate goal? To build brainy machines with memory systems that are as efficient (and maybe even as fond of the unexpected) as our own!

1. Based on the passage above, what is the main advantage of encountering confusing information according to the research?
 - (A) It strengthens the brain's ability to filter out unimportant details.
 - (B) It improves the brain's ability to remember unusual details.
 - (C) It makes the brain process information more quickly.
 - (D) It helps the brain to store more information overall.
2. Based on the passage, what does the phrase "**tune something out**" possibly mean?
 - (A) To ignore something that is subtle.
 - (B) To prepare for an upcoming change.
 - (C) To fail to receive the intended results.
 - (D) To show disagreement about something.

3. What can we infer about the researchers' goals?
- (A) To create a more efficient way of storing digital data.
 - (B) To design a new model that improves relaxation techniques.
 - (C) To understand why the brain prioritizes certain memories.
 - (D) To develop a new educational tool for teaching critical thinking.

Pickleball, with its quirky name and surprisingly fast-growing popularity, might leave you scratching your head. But this unique sport, combining elements of tennis, badminton, and table tennis, is quickly becoming a nationwide phenomenon. Played with a paddle and a perforated plastic ball on a badminton-sized court, pickleball offers a fun and accessible activity for people of all ages and skill levels.

Matches can be played with either singles or doubles teams, with the goal being the first to reach 11 points (win by two). Similar to tennis, each point starts with a serve that must bounce once on the opponent's side before volleys (hitting the ball in mid-air) are allowed. Faults, such as serving out of bounds or hitting the ball into the net, result in a point for the opposing team.

The origins of pickleball are as intriguing as its name. Invented in the 1960s near Seattle, the story goes that two families were looking for a backyard activity to entertain their children. Using leftover equipment from tennis, badminton, and ping pong, they created a new game on a badminton court. The name "pickleball" itself remains shrouded in a bit of mystery. Some believe it derived from a family dog named Pickles who would chase the ball, while others suggest it came from the term "pickle boat," used in competitive rowing to describe a boat filled with leftover crew members.

Regardless of its origins, pickleball's appeal is undeniable. The smaller court size compared to tennis makes it easier to learn and manage, while the use of paddles instead of racquets allows for more controlled play. Additionally, the underhand serve, a unique rule in pickleball, reduces the power element, making it suitable for players of varying abilities. This combination of accessibility, fun, and exercise has propelled pickleball to become the fastest-growing sport in the United States. So, the next time you're looking for a new activity to try, grab a paddle and give pickleball a shot. You might just discover your new favorite game!

4. What is this passage mainly about?
- (A) A warning about a new sport.
 - (B) An introduction to a rising sport.
 - (C) A description of the rules of a sport.
 - (D) A comparison between some sports.
5. Which of the following about pickleball is NOT mentioned in this passage?
- (A) The way it is played.
 - (B) The equipment it involves.
 - (C) Some sports it puts together.
 - (D) Some cities where it is popular.
6. According to this passage, which of the following about pickleball is NOT true?
- (A) It can be played in a badminton court.
 - (B) The origin of its name remains uncertain.
 - (C) The score of 11-10 represents a game won by one team.
 - (D) It is fast gaining in popularity in the U.S.
7. According to this passage, what makes pickleball a sport fit for players of different abilities?
- (A) The way players serve.
 - (B) The pleasure it involves.
 - (C) The place where it is played.
 - (D) The equipment players use.

Imagine sifting through a dusty attic, full of forgotten trinkets. That's exactly what a team of astronomers did, but instead of an attic, they combed through a massive archive of starlight. Their prize? Three ancient stars, nicknamed SASS (Small Accreted Stellar System stars), lurking in the outskirts of our Milky Way galaxy.

These stellar oldies are estimated to be 12 to 13 billion years old, making them some of the first stars ever born. The coolest part? They weren't always Milky Way residents. By analyzing their chemical makeup, the team discovered they lacked the heavier elements cooked up by later stellar generations. This fingerprint hinted at an origin story far grander.

The team theorized these stars were once part of tiny, ancient galaxies, gobbled up by the growing Milky Way long ago. Like cosmic fossils, they held clues to the formation of these ultrafaint dwarf galaxies, thought to be the universe's earliest building blocks. But these faint galaxies are too distant to study in detail.

Enter the SASS stars - our galactic captives! By studying them, astronomers can crack the code on those distant galaxies without venturing into the vast emptiness of space. It's like having a textbook on the history of the universe right in your own backyard!

The discovery unfolded in a unique way. Professor Frebel's MIT class, diving into observational stellar archaeology, got their hands dirty on real data. They analyzed starlight spectra, detective work to reveal a star's chemical secrets. After hours of work (and maybe a few frantic texts!), they identified the three SASS stars with their low chemical abundance - a telltale sign of immense age.

Another clue emerged from the stars' peculiar movements. Unlike most Milky Way stars following a predictable path, these rebels were moving in the "wrong way." This "retrograde motion" **suggested** they were once part of a separate entity, eventually captured by our galaxy.

Fueled by this discovery, Frebel combed through existing data and found 65 more stars with similar traits - ancient, low in heavy elements, and sporting a galactic backstroke. This population of SASS stars promises a treasure trove of information about the universe's earliest days.

The team is now on a mission to unearth more SASS stars, hoping to unlock the secrets of these galactic hitchhikers and the ancient galaxies they hail from. It's a testament to the power of scientific collaboration, with a dash of classroom wonder, that led to this stellar discovery.

8. Which is the most likely source of the passage?
- (A) A newspaper editorial analyzing the government's policies.
 - (B) A manual in which scientific experiment steps are detailed.
 - (C) A journal of an astrologist exhibiting their interest in star signs.
 - (D) A magazine introducing the latest discoveries in space science.
9. Which of the following sentences uses the word "**suggest**" in the same meaning as it is used in paragraph 6?
- (A) The students' sloppy manner may have **suggested** that they were not interested in the activity.
 - (B) My best friend, Mary, **suggested** that I buy some flowers to celebrate my partner's birthday.
 - (C) To temporarily relieve the discomfort from allergy, my doctor **suggested** using a nasal spray.
 - (D) The committee **suggested** that a union meeting be held in response to the latest dispute.
10. According to the passage, what is the significance of studying SASS?
- (A) Astronomers get to know why Milky Way vanishes.
 - (B) It allows for more precise measurement of stellar distances.
 - (C) It helps to reveal how and where the universe originates.
 - (D) It helps to confirm existing theories about stellar evolution.

第二大題、翻譯題(每題 5 分，共 30 分)

一、中翻英

1. 改善學生在教室中的行為，對促進一個讓所有個體都能成長茁壯，且能達成教育潛能的環境而言，至關重要。若有個環境能讓家長及學生想參與，且感到被重視，他們將會對教育系統更有信心。
2. 運動是舒緩壓力的一個好方法。不論是跑跑步，從事最喜歡的運動，甚或只是走一走，只要你身體動起來，就會釋放讓你心情愉悅的化學物質—腦內啡(endorphins)。
3. 108 課綱於 2019 年實施，代表我國對 12 年國教體系的重大變革(overhaul)。這項改革跳脫背誦記憶與以考試為中心的學習，旨在培養擁有強大核心素養的全人(well-rounded individuals)。

二、英翻中

1. Kaohsiung Light Rail perfectly blends modern transportation with eco-friendly plans. With a network spanning over 22 kilometers, it connects the city's bustling districts, offering a smooth and efficient means of travel.
2. Women working in STEM (Science, Technology, Engineering, and Math) fields are published less and often receive lower salaries than their male counterparts. Whilst university enrolments are increasing, many opt out at the highest levels required for a research career.
3. Language barriers are those features of language use that result in mis-comprehension or complete loss in communication. Language barriers deal with aspects of language use that make it difficult to understand. This could be because of a variety of factors like differences in educational background, level of literacy and country or area of the language user.

第三大題、申論題(共 30 分)

1. You received an email from a parent of a student in your class. Please write a 200-250-word letter in reply to their request. Follow the instructions below:
 - (1) Use the pseudo-names provided in the letter and DO NOT reveal your real name anywhere in your response.
 - (2) You are advised to read the incoming letter closely.
 - (3) Please pay attention to the format of an email.

Dear Mx Chen,

I hope this message finds you well. I'm writing to express my concerns regarding a situation involving my daughter, Leslie, in your classroom. As her parent, I feel it's important to bring this matter to your attention.

Recently, my daughter has been experiencing some difficulties in class due to the actions of another student. It seems that Avery has playing tricks on her, which has caused her unnecessary distress and distraction during lessons. These pranks have ranged from minor disruptions to more serious incidents, such as name-calling and body shaming, which is affecting my daughter's ability to focus and participate fully in class activities.

I kindly request that you address this matter with Avery and take appropriate steps to ensure that such behavior is not tolerated in the classroom. I would also appreciate if you could keep me updated on any actions taken to resolve this issue.

Sincerely,

Harper