

※ 請注意：本試題不可使用計算機。請於答案卡及答案卷作答，於本試題紙上作答者，不予計分。

I. Cloze Test: 50%. Single-choice questions; 2% for each question. 【注意：本大題須於答案卡作答】

A.

The face of air pollution has changed. Modern air pollution does not look like the thick black industrial smoke from the past. We are all familiar with images of Beijing's Bird's Nest Olympic stadium and the Forbidden City shrouded in haze and the city's residents wearing protective __1__. Despite this coverage in the news, Beijing does not head the WHO list of the world's most polluted cities. It was 56th in 2016 and __2__ to 187th in 2017.

Of the worst fifty, the vast majority are in __3__: twenty-four cities are in India, eight are in China, three in Iran and three in Pakistan. Six of the worst fifty are in the Middle East, including four in Saudi Arabia.

At the other end of the scale, we find small towns in Iceland, Canada, the US and Scandinavia are some of the cleanest. There are some large cities near the bottom of the list too—including Vancouver and Stockholm—which show that air pollution is not a(n) __4__ part of city life.

Air pollution is a global challenge that still needs to be __5__ alongside both climate change and the creation of healthy cities.

1. (A) gloves (B) masks (C) scarfs (D) helmets
2. (A) rose (B) raised (C) dropped (D) diminished
3. (A) Oceania (B) Asia (C) North America (D) Africa
4. (A) inevitable (B) avoidable (C) regrettable (D) unforgettable
5. (A) erased (B) destroyed (C) tackled (D) waived

B.

The Mediterranean diet is not only good for your heart. It is also good for your waistline, according to a recent study that compared the Mediterranean diet with other weight-loss diets.

The trials, which included a total of 998 overweight or __6__ people, pitted the Mediterranean diet (which is rich in vegetables, fruits, grains, beans, and olive oil but light on meat, dairy, and eggs) __7__ one or more of three other diets: a low-fat diet, a low-carb diet, and the American Diabetes Association diet.

Over all, people lost between 9 and 22 pounds after a year on the Mediterranean diet, which was similar to the number of pounds __8__ by those on a low-carb diet or the ADA diet. In comparison, those on the low-fat diets __9__ between just 6 and 11 pounds.

For people who want to lose weight, there is no single, ideal diet. However, because the Mediterranean diet also appears to cut the __10__ of heart attack and stroke by 30%, it is an especially good option for those prone to heart disease. The study __11__ in the latest issue of *The American Journal of Medicine*.

6. (A) oversight (B) stretched (C) enlarged (D) obese
7. (A) against (B) on (C) by (D) for
8. (A) shed (B) gained (C) acquired (D) received

9. (A) lost (B) loose (C) loss (D) losing
 10. (A) benefit (B) bonus (C) risk (D) relation
 11. (A) seen (B) read (C) disappeared (D) appeared

C.

Japan experienced a string of severe natural disasters in the summer of 2018, ranging from big earthquakes in Osaka and Hokkaido to torrential rains that caused landslides and floods over broad areas of western Japan, a powerful typhoon that __12.__ Kansai International Airport and what was called a “disaster-level” heat wave that killed dozens of people across the country.

The Japanese government recently compiled an emergency three-year program to fix vulnerabilities in key infrastructure, such as river embankments, roads and bridges, airports and power facilities to make them more __13__ against big disasters. These efforts are __14.__ necessary. But priorities need to be set on projects that require __15.__ action, so that the government’s limited financial resources can be used as efficiently as possible. Improvement must be made not only to physical infrastructure but also to operational aspects of the anti-disaster efforts — such as better communications and sharing of information with local residents to enable timely evacuations — to __16.__ the impact of disasters.

Since the effort to beef up infrastructure to better withstand disasters has its limits, it must be accompanied by efforts to improve the operation of anti-disaster systems. When torrential rains struck western Japan in July, many of the landslides and floods that caused a large numbers of __17.__ happened in areas that had long been identified as being at risk for such damage. Since the forecasts of heavy rainfall hitting the risk areas did not lead to the __18.__ evacuation of many residents, a large number of them died. In addition, mechanisms to quickly share disaster information with residents, and to prompt and assist them to safely evacuate, must be implemented or improved. People living in these areas need to be properly __19.__ of the disaster risks in their neighborhood. Finally, measures to regulate housing development in areas with high risks of flooding or landslides may need to be considered as part of the anti-disaster efforts.

12. (A) accelerated (B) paralyzed (C) strengthened (D) fortified
 13. (A) fragile (B) resilient (C) tender (D) soft
 14. (A) barely (B) hardly (C) indeed (D) perhaps
 15. (A) busy (B) hardworking (C) diligent (D) urgent
 16. (A) worsen (B) mitigate (C) fester (D) injure
 17. (A) fatalities (B) fallacies (C) mortality (D) immortality
 18. (A) on time (B) timed (C) punctual (D) timely
 19. (A) scolded (B) comforted (C) excluded (D) informed

D.

In October 2018, Facebook Inc. said it removed 559 pages and 251 accounts that were coordinating the spread of misinformation and spam in the U.S. — and most originated from within the country.

The social network, which has been under fire for __20.__ foreign interference in U.S. politics, has found that domestic actors have also been creating fake pages and accounts to attract people with shocking political news, the way they have in the past with celebrity news or health news. Their motivation is __21.__ financial, the company said.

In the past, Facebook has pulled hundreds of fake pages spreading political misinformation from countries including Russia and Iran. Those types of posts had the aim of sowing __22.__ in the U.S., setting up protest events and moments of outrage. The domestic actors, in contrast, are trying to generate __23.__ by getting more people to click on their accounts, pages or advertisements, according to Facebook. One thing in common, though, is the use of fake identities and accounts to artificially increase the popularity of certain news, gaming the company's __24.__ in the process.

Facebook's rules don't stop people from saying things that are false and __25.__. But the company tries to take down accounts and pages that are not from real people.

20. (A) disabling (B) stopping (C) facilitating (D) inhibiting
 21. (A) mostly (B) conversely (C) sharp (D) contrary
 22. (A) reconciliation (B) interest (C) discord (D) affection
 23. (A) contempt (B) revenue (C) bitterness (D) conflict
 24. (A) algorithm (B) prospect (C) currency (D) saving
 25. (A) incendiary (B) cement (C) incentive (D) centralized

II. Reading Comprehension: 30%. Single-choice questions; 3% for each question. 【注意：本大題須於答案卡作答】

A.

A decade ago, at the end of my first semester teaching at Wharton, a student stopped by for office hours. He sat down and burst into tears. My mind started cycling through a list of events that could make a college junior cry: His girlfriend had dumped him; he had been accused of plagiarism. "I just got my first A-minus," he said, his voice shaking.

Year after year, I watch in dismay as students obsess over getting straight A's. Some sacrifice their health; a few have even tried to sue their school after falling short. All have joined the cult of perfectionism out of a conviction that top marks are a ticket to elite graduate schools and lucrative job offers.

I was one of them. I started college with the goal of graduating with a 4.0. It would be a reflection of my brainpower and willpower, revealing that I had the right stuff to succeed. But I was wrong.

The evidence is clear: Academic excellence is not a strong predictor of career excellence. Across industries, research shows that the correlation between grades and job performance is modest in the first year after college and trivial within a handful of years. For example, at Google, once employees are two or three years out of college, their grades have no bearing on their performance. (Of course, it must be said that if you got D's, you probably didn't end up at Google.)

Academic grades rarely assess qualities like creativity, leadership and teamwork skills, or social,

emotional and political intelligence. Yes, straight-A students master cramming information and regurgitating it on exams. But career success is rarely about finding the right solution to a problem — it's more about finding the right problem to solve.

Getting straight A's requires conformity. Having an influential career demands originality. In a study of students who graduated at the top of their class, the education researcher Karen Arnold found that although they usually had successful careers, they rarely reached the upper echelons. "Valedictorians aren't likely to be the future's visionaries," Dr. Arnold explained. "They typically settle into the system instead of shaking it up." That might explain why Steve Jobs finished high school with a 2.65 G.P.A., or J.K. Rowling graduated from the University of Exeter with roughly a C average.

26. What is the most likely title of the essay above?
(A) Global Language for the Twenty-First Century
(B) Occupational Education under Siege
(C) Key to Success in the Tech Sector
(D) What Straight-A Students Get Wrong
27. What is the author's occupation?
(A) Professor (B) Tax Auditor (C) Interior Designer (D) Zoologist
28. According to the author, good grades simply prove students' ability to _____.
(A) create creative plans (B) memorize course materials
(C) lead a team for challenge (D) navigate a new environment
29. Dr. Karen Arnold found that straight-A students usually had successful careers, but they _____.
(A) rarely became the game changers (B) usually failed shortly
(C) tended to quit too early (D) are troubled by self-doubts
30. What do the examples of Steve Jobs and J. K. Rowling demonstrate?
(A) Career excellence must be fostered from an early age.
(B) Career excellence is not dependent on academic excellence.
(C) Career excellence is over emphasized in our society.
(D) Career excellence can only emerge from states of distress.

B.

There are many games that rely on dice. We expect that these dice will be "fair" and that each is as likely to land on any of their six sides. But probability wasn't always a concern when it came to the roll of the dice. A study analyzed dice dating from the Roman era to the 17th century. It found that the ubiquitous little cubes have become increasingly uniform over time and they have become increasingly fair.

The researchers found that dice made before 400 B.C., or during the Roman era, were large. These dice typically adhered to the "sevens" configuration. In this configuration, opposite sides add up to the number seven (1-6, 2-5, 3-4). This is the configuration commonly used today, but unlike the symmetrical cubes that we know, Roman dice were highly irregular in shape. They were made from a variety of materials. According

to the researchers, it is possible that ancient Romans deliberately used irregular dice because they thought it would help manipulate the roll. But it might also be true that Romans weren't particularly concerned about the shape of their dice. They may have believed that the outcome of a roll was determined by fate.

Dice became more standardized starting in 1100 A.D., suggesting that European gamblers became increasingly concerned about rooting out players who tried to gain an advantage with unfair dice. The cubes got smaller, which led to a change in design.

During the Renaissance, dice underwent yet another significant change. Starting around 1450, they became less regular in size and pip style, but more standardized in symmetry and configuration. The increasing attention paid to symmetry in particular may have been driven by new knowledge of probability, a field of mathematics that blossomed during the Renaissance.

Knowing about these six-sided implements can be very useful to archaeologists and historians. For one, understanding changes in dice could help with the dating of archaeological sites, particularly if there is a scarcity of other materials that would be useful in dating. Dice also offer insight into the transmission of knowledge throughout northwestern Europe. While ancient dice were quite irregular, later dice were standardized. This suggests either that there were a small number of die manufacturers, or that manufacturers were staying faithful to culturally transmitted rules about dice production. What is more, the changing role of the dice itself suggests shifting worldviews in Europe.

31. According to the essay above, new discoveries about dice reveal Europeans' changing attitudes about _____.
- (A) health (B) fate (C) wealth (D) fame
32. Unlike the common dice in our times, Roman dice were _____.
- (A) made of wood (B) made from single-origin cocoa beans
(C) highly irregular in shape (D) uniformed in size
33. While ancient Romans believed the outcome of a roll was determined either by authorities or divine powers, Europeans during the Renaissance believed that dice should be fair and all numbers should appear _____.
- (A) in a fixed pattern (B) as a prophecy
(C) to carry out justice (D) with equal probability
34. The popularity of symmetrical dice during the Renaissance is reflective of the development of _____ in the same time frame.
- (A) chemistry (B) mathematics (C) physics (D) astrology
35. Nowadays, researchers can give us lucid explanations of how dice travel across regions and periods. However, which of the following is **NOT** among their primary concerns?
- (A) Determining the material (B) Locating the origin
(C) Analyzing the cultural background (D) Naming the designer

III. Composition: 20% 【注意：本大題於答案卷作答】

How good are you at time management? Do you easily get distracted, feel lazy, and tend to procrastinate? Or, are you a disciplined person who does what you need to when you need to do it? Write a short essay of 100-120 words to explain the strategies you use to keep yourself focused on achieving your goals.