

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

I. Write one word in each gap to complete the sentences (2% × 5 = 10%).

1. _____ taking the medicine, I still feel ill.
2. I'm going on holiday _____ relax.
3. This machine is used _____ cutting metal.
4. The book _____ I read on the plane was excellent.
5. Daniel is the student _____ sister is famous.

II. Choose the best way to complete the sentences (2% × 5 = 10%).

6. _____ been waiting to see a doctor for ages.
(A) I'm (B) I've
7. Students _____ to take drinks into class.
(A) aren't allowed (B) can't
8. We lost the match. We _____ played better.
(A) should (B) should have
9. I've got a mobile phone but _____ is broken.
(A) it (B) one
10. Is there _____ good on TV?
(A) something (B) anything

III. In the following questions, choose the answer that corrects the sentence underscored.

(4% × 10 = 40%).

11. Stanford University gave the Musician of the Year Award to Joan White, one of only eight musicians who had performed in the end-of-the-year revue.
(A) one of only eight musicians who had performed in the end-of-the-year revue
(B) one of eight of the only musicians who have performed in the end-of-the-year revue
(C) one of the only eight musicians who performs in the end-of-the-year revue
(D) only one of eight musicians to perform in the end-of-the-year revue
(E) only one of the eight end-of-the-year musicians who performs in the revue
12. Hospitals are increasing the hours of doctors, significantly affecting the frequency of surgical errors, which already are a cost to hospitals of millions of dollars in malpractice lawsuits.
(A) significantly affecting the frequency of surgical errors, which already are a cost to hospitals of
(B) significantly affecting the frequency of surgical errors, which already cost hospitals
(C) significantly affecting the frequency of surgical errors, already with hospital costs of

(D) significant in affecting the frequency of surgical errors, and already costs hospitals

(E) significant in affecting the frequency of surgical errors and already costs hospitals

13. The shipping of raw materials being improved has become an economical factor in the transformation of Japan into a world economic power.

(A) The shipping of raw materials being improved has become an economical

(B) The improved shipping of raw materials has become an economical

(C) That the shipping of raw materials is improved has become an economical

(D) The shipping of raw materials being improved has become an economic

(E) The improvement in shipping of raw materials has become an economic

14. At the end of the Second World War, the United States allocated huge sums of money to cover the costs of reconstruction that it expected to undertake in Europe as a result of negotiations with European governments.

(A) costs of reconstruction that it expected to undertake in Europe as a result of negotiations

(B) costly reconstruction it expected to undertake in Europe as a result from negotiations

(C) costing reconstructions expected to be undertaken in Europe as a result of negotiating

(D) negotiated costs in reconstruction it expected to undertake in Europe

(E) costs expected to be undertaken in reconstruction in Europe from negotiating

15. Ricks has written extensively on not only major figures in English poetry like Milton and Housman, but also on the lyrics of Bob Dylan.

(A) on not only major figures in English poetry like Milton, but also on

(B) not only on the poetry of such major figures as Milton and Housman, but also on

(C) not only on major figures in English poetry like Milton and Housman, but also on

(D) on major figures in English poetry like Milton and Housman, as well as

(E) on major figures in English poetry such as Milton and Housman, but also on

16. An analysis of sixteenth century probate inventories in the major English towns show that even some artisans and yeomen owned silver spoons, cups or salt cellars.

(A) show that even some artisans and yeomen owned silver spoons, cups or

(B) show that some artisans and yeomen even owned silver spoons, cups or

(C) show that even some artisans and yeomen owned silver spoons, cups and

(D) shows that some artisans and yeomen owned even silver spoons, cups and

(E) shows that even some artisans and yeomen owned silver spoons, cups or

17. Since the path-breaking discovery, just over fifty years ago, of the structure of the DNA molecule, scientists have made astounding progress to understand and manipulate this most important of biological molecules.

(A) scientists have made astounding progress to understand and to manipulate

(B) scientists have made astounding progress in understanding and manipulating

- (C) astounding progress has been made by scientists to understand and to manipulate
- (D) scientists made astounding progress in understanding and manipulating
- (E) astounding progress was made by scientists in understanding and manipulating

18. China's economy continues to flourish this year: industrial production grew, inflation has eased, and the trade surplus swelled.

- (A) grew, inflation has eased, and the trade surplus swelled
- (B) has grown, inflation has eased, and the trade surplus swelled
- (C) has grown, inflation eased, and the trade surplus has swelled
- (D) has grown, inflation eased, and the trade surplus is swelling
- (E) is growing, inflation easing and the trade surplus swelling

19. A teacher at the school acknowledged that, despite government sponsored endeavors to improve classroom performance, an extraordinary high percentage of their students fail to gain admission to higher education.

- (A) an extraordinary high percentage of their students fail to gain admission to higher education
- (B) an extraordinarily high percentage of its students fail to gain admission to higher education
- (C) an extraordinary high percentage of its students fails to gain admission to higher education
- (D) the percentage of their students failing to gain admission to higher education is extraordinarily high
- (E) a high percentage of its students, extraordinarily high in fact, fails to gain admission to higher education

20. A course of cognitive behavior therapy can be as effective, if not more so, than drug therapy and without the side effects, in helping the elderly to overcome insomnia.

- (A) as effective, if not more so, than drug therapy and without the side effects, in helping the elderly to overcome insomnia
- (B) more effective than drug therapy and without the side effects, in helping the elderly to overcome insomnia
- (C) at least as effective in helping the elderly overcome insomnia as drug therapy, and is without the side effects of drug treatment
- (D) at least as effective as drug therapy in helping the elderly to overcome insomnia without side effects
- (E) equally effective as drug therapy in helping the elderly to overcome insomnia without side effects

IV. Reading (4% × 5 = 20%).

Television's Invention

In the early years of television, Vladimir Zworykin was, at least in the public sphere, recognized as its

inventor. His loudest champion was his boss, David Sarnoff, then president of RCA and a man that we regard even today as “the father of television.” Current historians agree, however, that Philo Farnsworth, a self-educated prodigy who was the first to transmit live images, was television's true inventor.

In his own time, Farnsworth's contributions went largely unnoticed, in large part because he was excluded from the process of introducing the invention to a national audience. Sarnoff put televisions into living rooms, and Sarnoff was responsible for a dominant paradigm of the television industry that continues to be relevant today: advertisers pay for the programming so that they can have a receptive audience for their products. Sarnoff had already utilized this construct to develop the radio industry, and it had, within ten years, become ubiquitous. Farnsworth thought the television should be used as an educational tool, but he had little understanding of the business world, and was never able to implement his ideas.

Perhaps one can argue that Sarnoff simply adapted the business model for radio and television from the newspaper industry, replacing the revenue from subscriptions and purchases of individual newspapers with that of selling the television sets themselves, but Sarnoff promoted himself as nothing less than a visionary. Some television critics argue that the construct Sarnoff implemented has played a negative role in determining the content of the programs themselves, while others contend that it merely created a democratic platform from which the audience can determine the types of programming it wants.

21. The primary purpose of the passage is to

- (A) correct public misconception about Farnsworth's role in developing early television programs
- (B) debate the influence of television on popular culture
- (C) challenge the current public perception of Vladimir Zworykin
- (D) chronicle the events that led up to the invention of the television
- (E) describe Sarnoff's influence on the public perception of television's inception, and debate the impact of Sarnoff's paradigm

22. It can be inferred from the third paragraph of the passage that

- (A) television shows produced by David Sarnoff and Vladimir Zworykin tended to earn negative reviews
- (B) educational programs cannot draw as large an audience as sports programs
- (C) a number of critics feel that Sarnoff's initial decision to earn television revenue through advertising has had a positive or neutral impact on content
- (D) educational programs that are aired in prime time, the hours during which the greatest number of viewers are watching television, are less likely to earn a profit than those that are aired during the daytime hours
- (E) in matters of programming, the audiences preferences should be more influential than those of the advertisers immune interrupted

23. Which of the following best illustrates the relationship between the second and third paragraphs?

- (A) The second paragraph dissects the evolution of a contemporary controversy; the third paragraph presents differing viewpoints on that controversy.
- (B) The second paragraph explores the antithetical intentions of two men involved in the infancy of an industry; the third paragraph details the eventual deterioration of that industry.
- (C) The second paragraph presents differing views of a historical event; the third paragraph represents the author's personal opinion about that event.
- (D) The second paragraph provides details that are necessary to support the author's opinion, which is presented in the third paragraph.
- (E) The second paragraph presents divergent visions about the possible uses of a technological device; the third paragraph initiates a debate about the ramifications of one of those perspectives.

24. According to the passage, the television industry, at its inception, earned revenue from

- (A) advertising only
- (B) advertising and the sale of television sets
- (C) advertising and subscriptions
- (D) subscriptions and the sale of television sets
- (E) advertising, subscriptions, and the sale of television sets.

25. The passage suggests that Farnsworth might have earned greater public notoriety for his invention if

- (A) Vladimir Zworykin had been less vocal about his own contributions to the television
- (B) Farnsworth had been able to develop and air his own educational programs
- (C) Farnsworth had involved Sarnoff in his plans to develop, manufacture, or distribute the television
- (D) Sarnoff had involved Farnsworth in his plans to develop, manufacture, or distribute the television
- (E) Farnsworth had a better understanding of the type of programming the audience wanted to watch most.

V. Translation into Chinese (20%)

請閱讀以下與第五代行動通訊(5G)有關的段落後翻譯為暢通的中文，評分重點為語意精確度，除了標示有底線的字彙為技術專有名詞不需翻譯之外，中文段落中每出現一個英文字彙扣 2 分。

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OFDM has a high peak-to-average power ratio (PAPR). Generally speaking, the orthogonal portions of an OFDM signal deliver energy constructively—that is, the very quality that prevents the signals from canceling

each other out also prevents each portion's energy from canceling out the energy of other portions. That means any receiver needs to be able to take in a lot of energy at once, and any transmitter needs to be able to put out a lot of energy at once. Those high-energy instances cause OFDM's high PAPR and make the method less energy efficient than other encoding schemes. One promising alternative that 5G is considering, non-orthogonal multiple access (NOMA), could deliver the advantages of OFDM while also overlapping users on the same spectrum. For now, telecom operators believes OFDM and OFDMA will suit 5G's early needs. They see 5G first being used by smartphones, with applications like massive machine-type communications not arriving for at least another year or two, after the completion of Release 16, currently scheduled for December 2019.