

**國立中科實驗高級中學 100 學年度第 1 次教師甄選
英文科試題本**

測驗說明：題目共 9 頁

本試題分為兩部分：**選擇題與非選擇題**。

第一部份選擇題共 50 分，每題 1 分，請用 2B 鉛筆在答案卡上劃卡。

第二部分非選擇題共 50 分，配分如題示，請在答案本上作答，
並清楚標明題號，不需抄題。

第一部分 選擇題 50%

I. Vocabulary 20%

1. Firefighters searched for survivors, combing the remains of houses and neighborhood _____ by the nation's deadliest tornado outbreak in almost four decades.
(A) deviated (B) advocated (C) pulverized (D) mollified
2. The board of directors has agreed on a 10 percent _____ in salary for all the employees in the next year.
(A) increment (B) indictment (C) infringement (D) integument
3. We had not realized how much people appreciated the library's old borrowing policy until we received complaints once it had been _____.
(A) administered (B) superseded (C) reprimanded (D) germinated
4. His life was solely devoted to _____ pleasures, like food, wine, women, and so on, before he met the Stewart family, who taught him to seek true spiritual values.
(A) discreet (B) fervid (C) precocious (D) temporal
5. Whatever its final contours, the expected electoral _____ is all but certain to reshape the remaining two years of Obama's term.
(A) outpost (B) retribution (C) inauguration (D) upheaval
6. Surrounded by a host of besiegers and unable to _____ their supplies, the defenders of the castle feared their food would soon be exhausted.
(A) relish (B) refurbish (C) replenish (D) relinquish
7. He was so _____ about table manners that he lost his equanimity when his son reached for the bread.
(A) precarious (B) fastidious (C) commodious (D) presumptuous
8. The fire marshals spend many hours seeking the cause of the _____ in which so many people

were killed and so many others hospitalized with major burns.

(A) avalanche (B) conflagration (C) labyrinth (D) maelstrom

9. She spent the day doing all the _____ tasks that had to be done, cooking, washing, ironing and cleaning.
(A) surveillance (B) humdrum (C) premium (D) breach
10. For all the hardships involved in the study of seals, the Arctic researchers have occasional moments of pure _____ over some new discovery.
(A) exhilaration (B) indignation (C) abomination (D) hallucination
11. The lawyer was going to _____ the plaintiff until her client was proven innocent.
(A) refute (B) subdue (C) eschew (D) delineate
12. Torn between loving her parents one minute and hating them the next, she was confused by the _____ of her feelings.
(A) indolence (B) effervescence (C) benevolence (D) ambivalence
13. We do not yet have the theory of everything, but most physical phenomena are readily _____.
(A) frivolous (B) palatable (C) terse (D) explicable
14. This well-documented history is of importance because it carefully _____ the considerable accomplishments of Indian artists who are all too little known to the public at large.
(A) emancipates (B) manipulates (C) rehabilitates (D) substantiates
15. The _____ of Queen Elizabeth I impressed her contemporaries: she seemed to know what dignitaries and foreign leaders were thinking.
(A) symbiosis (B) malevolence (C) perspicacity (D) consternation
16. She was accused of plagiarism in a dispute over a short story, and, though _____, she never recovered from the accusation and the scandal.
(A) verified (B) designated (C) exonerated (D) retaliated
17. His _____ smile clearly conveyed that he was not going to take anything we said seriously.
(A) belligerent (B) imposing (C) mundane (D) supercilious
18. Archaeologists are involved in _____ Mayan temples in Central America, uncovering the old ruins in order to learn more about the civilization they represent.
(A) penetrating (B) excavating (C) demolishing (D) rectifying

19. The law _____ that steel furnace slag could only be used for road paving, not on farmlands.
(A) stipulates (B) aggravates (C) decelerates (D) extorts
20. Although he had spent many hours at the computer trying to solve the problem, he was the first to admit that the final solution was _____ and not the result of his labor.
(A) schematic (B) reminiscent (C) fortuitous (D) peripheral

II. Cloze Test 20%

(A)

Peter Ilyich Tchaikovsky, a superstar in an era rich with great composers, lay dying. Tchaikovsky, known for his lush ballets and operas, deeply harmonious symphonies and piano concertos, and vivid choral and chamber music, appeared to have 21 cholera. His physician placed him in a red-hot bath, a drastic last attempt to get his failing kidneys to function. The treatment failed. Tchaikovsky, 53, slipped into a coma. His pulse faded.

He died on November 6, 1893. From that day, a debate has raged about the cause of his death. Some agree it was cholera. Others insist it was suicide. Still others believe it was murder. Despite research by dozens of scholars, this brilliant musician's death, over 100 years later, is still 22 in mystery.

The man who would brighten Christmases to come with the lively *Nutcracker*, touch hearts with the moving *Pathétique Symphony*, and produce countless 23 of the concert and opera stages, was born on May 7, 1840, in Kamensk-Votkinsk, Russia. Even as a toddler, young Peter showed a striking ability to remember complex melodies.

By age 6, he was fluent in Russian, French and German. At age 12, he began studying at St. Petersburg's School of Jurisprudence, preparing for a secure life as a civil servant. He was bored, but brilliant enough to move easily through his coursework.

On a rare visit, his mother took him to see the opera, *A Life for the Tsar*. It affected the teenager so powerfully that 24 from the opera turned up in his own work years later. This experience showed him very clearly the path he was meant to pursue.

On June 25, 1854, Peter Tchaikovsky's mother died of cholera, her 14-year-old son at her side. During this emotional crisis, Peter wrote his first piece of music. Times of emotional 25 would prove, again and again, to be fruitful times for composition.

After graduating from the School of Jurisprudence in 1859, Peter became a junior clerk at the Ministry of Justice. Just three years later, he gave up what could have been a lifetime sinecure to enroll in the St. Petersburg Music Conservatory. He received his first official 26, an overture for the marriage of Tsarevich Alexander and Princess Dagmar of Denmark in 1866.

During the late 1870s, Nadezhda von Meck, widow of a wealthy investor, presented Tchaikovsky with an annuity that allowed him to devote himself entirely to composition.

Von Meck's annuity 27 Tchaikovsky into a manic period of writing. He produced the

exquisite *Fourth Symphony* in record time. At its debut in March 1892, Tchaikovsky's *Nutcracker* was a huge hit, but his heart was with his groundbreaking *Sixth Symphony*, scheduled to debut in October. It was an unusual work, its main three movements followed by a slow, sad adagio. Unfortunately, the *Pathétique*, a name his brother suggested for the piece, received only 28 applause at its premiere. Tchaikovsky was heartsick. Just over a week later, he was dead.

The popular theory is that he died of cholera after drinking unboiled water. Another theory holds that the composer committed suicide over the 29 failure of *Pathétique*. The recent discovery of letters between Tchaikovsky's physician and his brother, which mention suicide, supports this claim. However, the jury is still out.

30, Tchaikovsky's music lives on. Many of his works continue to be recognized as masterpieces of classical music.

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| 21. (A) convulsed | (B) conceived | (C) contracted | (D) contravened |
| 22. (A) shrouded | (B) engrossed | (C) obstructed | (D) culminated |
| 23. (A) lapses | (B) staples | (C) glitches | (D) anecdotes |
| 24. (A) genres | (B) lyrics | (C) strains | (D) vogues |
| 25. (A) consensus | (B) resonance | (C) serenity | (D) turmoil |
| 26. (A) commission | (B) remission | (C) submission | (D) transmission |
| 27. (A) forfeited | (B) launched | (C) pampered | (D) inaugurated |
| 28. (A) congenial | (B) relentless | (C) tentative | (D) lukewarm |
| 29. (A) reconciled | (B) obsessed | (C) perceived | (D) envisioned |
| 30. (A) Therefore | (B) Meanwhile | (C) Hereafter | (D) Otherwise |

(B)

New brain research is shattering assumptions held for generations about the adolescent mind, fueling a battle over teen mental health, the rights of parents and the signals for diagnosis.

The picture that's emerging is a teen brain not merely awash in a brief tide of hormones, but also in the middle of a 31 overhaul. Those transitions, scientists now believe, are so significant that they may unlock the mysteries of mental illness, explaining why some teens take their own lives, why others harm their classmates and loved ones, or why some emerge later in life with 32 mental disorders.

The research looks forward to a day when teens could be tested for suicidal depression as easily as they are for diabetes. But already there are signs that society, and parents in particular, would reject such a tool. Many parents question the 33 of a mental health diagnosis, fearing that their children will be falsely tagged with a 34 they'll never outgrow. At the center of the controversy are the teen brain, its confounding architecture and the profound question of what's typical in a teen and what's not.

The new research shows a teenage brain as an organ in transition with an unstable and 35 composition. The evolving teenage brain clearly isn't adult-like until the early 20s. So if teens act "young and stupid," it may be because brain areas that dampen impulsivity and govern 36

thought are among the last to mature. All is fine when the brain develops normally. What's shaking up those involved with mental health is what happens when the teen brain fails to successfully reinvent itself as an adult brain. Researchers increasingly believe if that process 37, teens are susceptible to developing mental illness.

Until recently, scientists couldn't peer into living brains to look for changes associated with normal development or the 38 of disease. That is beginning to change, as researchers develop ever-more sensitive brain scanners. In the past several years, research groups have published composite pictures of healthy brains and those affected by mental illness. The differences appear striking but don't 39 between causes of psychiatric disorders and the consequences of having a mental illness. And the composite pictures are somewhat misleading. A snapshot of an individual brain may fall somewhere between "normal" and mentally ill, but cannot indicate with certainty that the person does or does not have a mental illness. For now, psychiatrists and psychologists must still rely on interviews and observations of children's behavior to 40 mental illness.

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|-------------------|----------------|-------------------|-----------------|
| 31. (A) elaborate | (B) requisite | (C) sophisticated | (D) tumultuous |
| 32. (A) crippling | (B) precluding | (C) sprawling | (D) gratifying |
| 33. (A) validity | (B) futility | (C) depravity | (D) ubiquity |
| 34. (A) dogma | (B) charisma | (C) stigma | (D) enigma |
| 35. (A) lucrative | (B) vulnerable | (C) compatible | (D) provocative |
| 36. (A) shrewd | (B) rational | (C) lethargic | (D) dumpish |
| 37. (A) misfires | (B) detours | (C) contends | (D) prevails |
| 38. (A) plights | (B) lunatics | (C) maneuvers | (D) ravages |
| 39. (A) conjure | (B) pinpoint | (C) distinguish | (D) apprehend |
| 40. (A) enlighten | (B) renounce | (C) facilitate | (D) diagnose |

III. Reading Comprehension 10%

(A)

A snowfall consists of myriads of minute ice crystals that fall to the ground in the form of frozen precipitation. The formation of snow begins with these ice crystals in the subfreezing strata of the middle and upper atmosphere when there is an adequate supply of moisture present. At the core of every ice crystal is a minuscule nucleus, a solid particle of matter around which moisture condenses and freezes. Liquid water droplets floating in the supercooled atmosphere and free ice crystals cannot coexist within the same cloud, since the vapor pressure of ice is less than that of water. This enables the ice crystals to rob the liquid droplets of their moisture and grow continuously. The process can be very rapid, quickly creating sizable ice crystals, some of which adhere to each other to create a cluster of ice crystals or a snowflake. Simple flakes possess a variety of beautiful forms, usually hexagonal, though the symmetrical shapes reproduced in most microscope photography of snowflakes are not usually found in actual snowfalls. Typically,

snowflakes in actual snowfalls consist of broken fragments and clusters of adhering ice crystals.

For a snowfall to continue once it starts, there must be a constant inflow of moisture to supply the nuclei. This moisture is supplied by the passage of an airstream over a water surface and its subsequent lifting to higher regions of the atmosphere. The Pacific Ocean is the source of moisture for most snowfalls west of the Rocky Mountains, while the Gulf of Mexico and the Atlantic Ocean feed water vapor into the air currents over the central and eastern sections of the United States. Other geographical features also can be the source of moisture for some snowstorms. For example, areas adjacent to the Great Lakes experience their own unique lake-effect storms, employing a variation of the process on a local scale. In addition, mountainous sections or rising terrain can initiate snowfalls by the geographical lifting of a moist airstream.

41. Which of the following questions does the author answer in the first paragraph?
- (A) How are snowflakes formed?
 - (B) Why are snowflakes hexagonal?
 - (C) In which months does most snow fall?
 - (D) What is the optimum temperature for snow?
42. What is the main topic of the second paragraph?
- (A) how ice crystals form
 - (B) how moisture affects temperature
 - (C) what happens when ice crystals melt
 - (D) where the moisture to supply the nuclei comes from
43. What is necessary for a snowfall to persist?
- (A) a decrease in the number of snowflakes
 - (B) lowered vapor pressure in ice crystals
 - (C) a continuous infusion of moisture
 - (D) a change in the direction of the airstream
44. How do lake-effect snowstorms form?
- (A) Water temperatures drop below freezing.
 - (B) Moisture rises from a lake into the airstream.
 - (C) Large quantities of wet air come off a nearby mountain.
 - (D) Millions of ice crystals form on the surface of a large lake.
45. Which of the following could account for the lack of snowfall in a geographical location close to mountains and a major water source?
- (A) too much moisture in the air
 - (B) too much wind off the mountains
 - (C) ground temperatures below the freezing point
 - (D) atmospheric temperatures above the freezing point

(B)

The term “filibuster” has been in use since the mid-nineteenth century to describe the tactic of delaying legislative action in order to prevent the passage of a bill. The word comes from the Dutch freebooter, or pirate, and most likely developed from the idea that someone conducting a filibuster is trying to steal away the opportunity that proponents of a bill have to make it successful. In the earlier history of the U.S. Congress, filibusters were used in both the House of Representatives and in the Senate, but they are now much more a part of the culture of the Senate than of the House. Because the House is a much larger body than is the Senate, the House now has rules which greatly limit the amount of time that each member may speak, which effectively serves to eliminate the filibusters as a mechanism for delaying legislation in the House.

In the Senate, the smaller of the two bodies, there are now rules that can constrain but not totally eliminate filibusters. The Senate adopted its first cloture rule in 1917, a rule which requires a vote of two-thirds of the Senate to limit debate to one hour on each side. The rule was changed in 1975 and now requires a vote of three-fifths of the members to invoke cloture in most situations. The longest filibuster on record occurred in 1957, when Senator Strom Thurmond of South Carolina wanted to delay voting on civil rights legislation. The filibuster was conducted for 24 hours and 18 minutes on August 28 and 29, when Thurmond held the floor of the Senate by lecturing on the law and reading from court decisions and newspaper columns. It was his hope that this filibuster would rally opponents of civil rights legislation; however, two weeks after the filibuster, the Civil Rights Act of 1957 passed.

46. It can be inferred from the information in paragraph 1 that around 1800 _____.

- (A) the first filibuster took place
- (B) legislative action was never delayed
- (C) the term “filibuster” was not in use in the U.S. Congress
- (D) the Dutch introduced the term freebooter

47. Based on the information, what would a vote of cloture most likely be used to do?

- (A) to initiate filibusters (B) to break filibusters
- (C) to extend filibusters (D) to encourage filibusters

48. In paragraph 2, what did the 1975 rule change actually lead to?

- (A) It made it easier to limit a filibuster.
- (B) It covered all types of Senate votes.
- (C) It increased the number of people needed to vote for cloture.
- (D) It decreased the number of people in the Senate.

(C)

The presence of natural radioactive carbon, or carbon 14, in the atmosphere presents a unique opportunity to establish the age of fossils up to 50,000 years old. The carbon 14 technique of dating organic materials relies on its gradual decay over a certain period of time.

The discovery of natural carbon 14 by Willard Libby of the United States began with the

realization that the same special process that had produced radiocarbon in the laboratory also takes place in the earth's upper atmosphere. This process creates carbon 14 atoms that react with oxygen to form carbon dioxide. Because it is formed in the air, radioactive carbon can enter any place atmospheric carbon dioxide is absorbed. It is found in plants, in animals that feed on plants, in marine waters and fresh waters as a dissolved component, and in aquatic plants and animals. All these organisms are invaded by carbon 14 atoms.

“Invaded” is probably not the proper word to describe the action of an element that Libby calculated to be present only to the extent of about one atom in one trillion. So low is the quantity of carbon 14 in the atmosphere that no one had detected it until Libby set out to measure it. He created methods to measure two factors, the degree to which carbon 14 is uniform throughout life forms, and the extent to which today's level of carbon 14 has remained constant over the years.

First, Libby demonstrated that carbon 14 exists in uniform quantities in living material. Subsequently, he determined the second factor by measuring the radiocarbon level in 5,000-year-old organic samples from places such as Egyptian tombs. He found that the half-life of carbon 14 is 5,700 years. Thus, he created a standard for a new method of dating organic materials.

49. Why does the author make the statement ***“Invaded is probably not the proper word”*** at the beginning of the third paragraph?
- (A) Because carbon 14 has always been present in life forms
 - (B) Because carbon 14 does not actually attack life forms
 - (C) Because carbon 14 is uniform throughout the plant and animal kingdom
 - (D) Because carbon 14 is found only in very small quantities
50. Which of the following is **NOT** a method by which carbon 14 is absorbed by fish?
- (A) By absorbing the carbon 14 in the atmosphere
 - (B) By ingesting other marine animals
 - (C) By absorbing the carbon 14 present in ocean waters
 - (D) By eating plants in the ocean

第二部分 非選擇題 50%

I. Summary and cloze test : 25%

After reading this passage below,

- (1) summarize it in your words of about **150** (10 %) , and
- (2) create a cloze test of **10** blanks with **four** options for each. (15 %)

Although some form of sex education is part of the curriculum at many schools, it's still a controversial issue in many countries nowadays. In the United States for instance, sex education raises much continuous debate. The debate is no longer should sex education be taught, but rather, how and what should be taught. In another word, it's about what methodology of sex education should be used.

There are two divisions of sex education programs in the United States currently –“abstinence-only” sex education versus “comprehensive” sex education. Abstinence-only programs, supported mostly by Christian groups and social conservative groups, teach that teens should not be sexually active until they at least finish high school and that the best life outcomes will be achieved by delaying sexual activity until marriage. It also completely avoids any discussion about the use of birth control devices, or only reveals failure rates of it. On the other hand, comprehensive sex education program, *consistent* more with a more liberal point of view, encourage abstinence, promote appropriate condom use, teach sexual communication skills, reduce HIV-risk behavior and also delay the start of sexual behavior.

As a matter of fact, the United States differs from Europe in its approach to sex education. In most of the European countries, sex education is a compulsory part of school curricula. In France, there are 30 to 40 hours of sex education delivered at school, and condoms are passed out to students in grade eight and nine. In Germany, sex education is a government duty by law since 1992. Most schools also offer courses concerning from growing-up process to the correct usage about birth control device. The Netherlands offer s its students a particularly open and informative curriculum on sexuality and birth control devices, and has one of the lowest rates of teenage pregnancy in the world.

II. Essay: 25 %

It seems natural and inevitable for learners to make errors during the process of language learning. Yet students’ repeated language mistakes can be a real pain in the neck of EFL teachers. In your opinion, what are the possible causes of errors in English writing among high school students in Taiwan? What feasible measures will you adopt to prevent fossilization of students’ writing mistakes? Please draw on your own teaching experiences and give examples to support your arguments.