

系所別:

學習與教學研究所

科目:

英文

答案請寫在答案本第一頁。作答時請將答案本橫置，大題標明清楚，一行寫十個答案。
例：I ABCDA BCDAB

CDABC

QUESTIONS

- Choose the one word or phrase that best completes the sentence. 30%
 - Most of the foods _____ cereals are similar in nutritional value.
A. make up B. made up of C. that are made of D. made from
 - Good English is the form of speech which is appropriate to the purpose of the speaker, and true to the language _____.
A. would it be B. like it would be C. what it is D. as it is
 - _____ in the words and phrases we use in speaking and writing.
A. There are choices to be made B. As there are choices being made
C. With choices making D. Choices we need to make
 - A ghost is the spirit of a dead person that somehow makes itself _____ the living.
A. to be known by B. known to C. be known by D. to know
 - The new constitution did not satisfy the people of the colony because _____.
A. its short of self-rule B. it was fallen short in self-rule
C. it fell short of self-rule D. of short in self-rule
 - Out of the fundamentals of elementary algebra _____ used today and the concept of an algebraic structure.
A. evolved the abstract algebra B. the abstract algebra evolution is
C. is evolved the abstract algebra D. evolution of the abstract algebra
 - Nowadays nearly all jobs _____ women and they have full legal equality with men.
A. which are opened for B. are open to
C. which are opening for D. open to
 - _____ the principles of genetics were known, early people began to domesticate wild animals and plants.
A. Although B. Once upon C. Long before D. Ever since
 - You will probably see several eclipses of the moon in your lifetime, but only rarely _____ to see a total solar eclipse.
A. will you be able B. can you be able
C. you can able D. you are able
 - _____ looks like a single red clover flower is actually an egg-shaped cluster of little flowers _____. petals are joined into a tube.
A. What, whose B. That, where C. Which, which D. It, in which
 - Mexico's food is highly seasoned _____ spices, _____ much of the food in Latin American countries.
A. in, so does B. with, as is C. by, so is D. for, like

注意：背面有試題

- The Italians delight in elaborate combinations of sculpture and water, such as _____.
A. decorating gardens and city squares B. those that decorate gardens and city squares
C. to decorate gardens and city squares D. which decorate gardens and city squares
 - The great works of painting and sculpture created by master artists are _____ fine art.
A. people call B. what is C. what we call D. been called
 - _____ much that scientists _____ yet learned about amphibians.
A. It seems, not B. It is, not C. There is, have not D. Only, have
 - X-rays are able to pass through objects and thus make _____ details that are otherwise impossible to observe.
A. visibly B. if visible C. visible D. them visible
- II. Choose the one underlined word or phrase that must be changed in order for the sentence to be correct. 30%
- Even giraffes were once widely spread across the African plains, many have been killed off.
A B C D
 - Famous universities founded at Heidelberg, Leipzig, and Rostock helped to set standard that were followed by universities all over the world.
A B C D
 - Grinding is a way in shaping an object by wearing away some of the material of which it is made.
A B C D
 - A metaphor is a figure of speech in which a word or phrase is taken out of its usual setting and place with another word to suggest likenesses.
A B C D
 - Land developers who are required to offer the public know how their proposed developments are likely to affect the environment.
A B C D
 - It is only when great amounts of overflowing of water cause severe damage to large surrounding areas that bodies of water can be said to be in flood.
A B C D
 - The mild climate of Florida makes it possible for commercial crops be grown year-round.
A B C D
 - About three or four times a century, a comet passes so close by our sun that its bright, glowing tail can be seen easily from earth.
A B C D
 - Most of us spend our lives surrounded by animals of one kind or another, although sometimes we do not aware of them.
A B C D
 - Jet propulsion can take place in a vacuum as long as oxygen is provision to burn the engine's fuel.
A B C D

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11. Many pet fish die from overfeeding than from any other cause.

- A B C D

12. The Atlantic Ocean is a huge body of water second only to the Pacific Ocean in size.

- A B C D

13. With water vapor and dust particles removed, air is a mixture of colorless gases.

- A B C D

14. Although atoms are invisible, their patterns may be projected onto the screen of a special microscope which it magnifies them over a million times.

- A B C D

15. Calcium, the most abundantly mineral in the body, works with phosphorus in maintaining bones and teeth.

- A B C D

III. Reading Comprehension: 40%

Questions 1-5

Basic research, in contrast to applied research, is simply the pursuit of knowledge for the sake of knowledge. Basic research seeks no better mousetrap, but only better understanding. There is widespread agreement among the experts in the field that basic research has yielded enormous payoffs in the past, and must continue to yield significant breakthroughs in the future if civilized society is to grow and prosper. Basic research has spawned the high-technology industry as we know it. It has also produced new and extraordinarily efficient sources of energy, the computer revolution, quantum advances in medical care and treatment, and even more effective economic policy.

These dramatic revolutions in technology originated primarily in major universities and in laboratories owned and operated by the government. Business and private industry contributed only a small share of the facilities and the cost, because money that publicly-held companies spend for basic research, even if the research yields valuable discoveries, may very well not be of direct and tangible benefit to the sponsoring firms themselves. Moreover, the enterprise that derives the greatest benefit from the basic research conducted by company A may well be company B in another industry. And it is likely that this distant beneficiary will pay nothing to defray the costs of this advance in knowledge.

Economists have traditionally termed this situation the "free-rider problem": to make a heavy investment in basic research is generally not profitable to private companies because free riders (such as company B mentioned above) are more than likely to reap some portion of, and not infrequently the bulk of, the benefits that accrue from the research. Worse still, sometimes company A's basic research will primarily benefit its key business rival, company C. This rival may be quicker to appreciate the value of the new knowledge and quicker to learn how to use it for its own purposes.

Up until the present time, only giant companies, whose enormous market shares have reduced their vulnerability to competitors in the marketplace, have sponsored an extensive level of basic research. Even these huge corporations, however, will continue to fund respectable programs of basic research only as long as they do not find themselves seriously threatened by their competition.

It is little wonder that a recent report by the Committee for Economic Development, an organization

composed largely of business executives little inclined to encourage government expenditure, concluded that there was no realistic alternative to the Federal Government as the primary source of support for basic research.

1. The main idea of the passage is best described as an attempt to

- A. compare and contrast basic research and applied research
B. argue that there should be major federal financing of basic research
C. suggest that companies should not compete with each other because basic research is impaired
D. condemn companies that benefit from research done by other firms

2. According to the author, basic research is responsible for all of the following EXCEPT

- A. a more widespread use of computers in modern business
B. the development of better economic policy
C. the free exchange of knowledge between competing companies
D. new methods of health care

3. Which of the following is NOT included as a contributor to basic research?

- A. Medium-sized companies B. Federal agencies
C. Academic institutions D. Companies with vast market shares

4. Small companies are reluctant to contribute to basic research because

- A. they have large market shares
B. its rewards are difficult to secure
C. basic research rarely produces economic benefits
D. abstract knowledge cannot be understood

5. The attitude of the business executives on the Committee for Economic Development concerning the need for federal funding of basic research was one of

- A. irritated frustration B. growing alarm
C. reluctant acceptance D. confident enthusiasm

Questions 6-13

The mistletoe plant grows on deciduous trees those that lose their leaves in autumn. It is spread by birds as they eat its white berries and then wipe their beaks on the bark of nearby branches. The sticky seeds put out tiny rootlets, thrust up leaves, and begin an extremely long life. Insects leave mistletoe alone. Winds never blow it down. Wintry ice and parching summers cause it no harm. Virtually indestructible, it dies only when the tree dies. One mistletoe ball was estimated to have survived four hundred years. For the tree, it is only a minor pest, manufacturing its own food from the chlorophyll of its leaves and using the tree simply as a source of liquid and vital minerals.

6. The passage indicates that mistletoe can be found on trees that

- A. produce white berries B. have exposed roots
C. have sticky bark D. shed their leaves annually

7. According to the passage, mistletoe seeds travel from place to place by

- A. sticking to berries B. blowing to nearby branches

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- C. spreading over loose bark D. clinging to birds' beaks
8. According to the passage, mistletoe grows by
 A. slowing climbing tree trunks B. attaching itself to leaves
 C. stretching out in long vines D. sprouting roots into tree bark
9. The passage indicates that mistletoe plants are most likely to be damaged by
 A. disturbance by wind B. bugs and animals
 C. extreme heat and cold D. destruction of trees
10. According to the passage, mistletoe may live
 A. a year at most B. until dry weather
 C. as long as the tree has its leaves D. an unusually long time
11. According to the passage, mistletoe obtains part of its nourishment by
 A. utilizing dirt that sticks to bark B. producing it independently
 C. removing it from tree leaves D. absorbing it from moist air
12. According to the passage, mistletoe does which of the following when it is growing on a tree?
 A. Destroys green leaves B. Robs the tree of chlorophyll
 C. Takes fluids from the tree D. Attracts many insect pests
13. Which of the following would be the best title for the passage?
 A. A Durable Plant B. A Plant Pest
 C. An Independent Plant D. A Plant with Many Uses

Questions 14-20

There were two widely divergent influences on the early development of statistical methods. Statistics had a mother who was dedicated to keeping orderly records of governmental units (state and statistics come from the same Latin root, *statum*) and a gentlemanly gambling father who relied on mathematics to increase his skill at playing the odds in games of chance. The influence of the mother on the offspring, statistics, is represented by counting, measuring, describing, tabulating, ordering, and the taking of censuses — all of which led to modern descriptive statistics. From the influence of the father came modern inferential statistics, which is based squarely on theories of probability.

Descriptive statistics involves tabulating, depicting, and describing collections of data. These data may be either quantitative, such as measures of height, intelligence, or grade level — variables that are characterized by an underlying continuum — or the data may represent qualitative variables, such as sex, college major, or personality type. Large masses of data must generally undergo a process of summarization or reduction before they are comprehensible. Descriptive statistics is a tool for describing or summarizing or reducing to comprehensible form the properties of an otherwise unwieldy mass of data.

Inferential statistics is a formalized body of methods for solving another class of problems that present great difficulties for the unaided human mind. This general class of problems characteristically involves attempts to make predictions using a sample of observations. For example, a school superintendent wishes to determine the proportion of children in a large school system who come to school without breakfast, have been vaccinated for flu, or whatever. Having a little knowledge of statistics, the superintendent would know

that it is unnecessary and inefficient to question each child; the proportion for the entire district could be estimated fairly accurately from a sample of as few as 100 children. Thus, the purpose of inferential statistics is to predict or estimate characteristics of a population from a knowledge of the characteristics of only a sample of the population.

14. With what is the passage mainly concerned?
 A. How to use descriptive statistics
 B. The development and use of statistics
 C. The drawbacks of descriptive and inferential statistics
 D. Applications of inferential statistics
15. According to the first paragraph, counting and describing are associated with
 A. qualitative changes B. unknown variables
 C. descriptive statistics D. inferential statistics
16. Why does the author mention the "mother" and "father" in the first paragraph?
 A. To introduce inferential statistics
 B. To explain that there are different kinds of variables
 C. To point out that parents can teach their children statistics
 D. To present the background of statistics in a humorous and understandable way
17. The word "squarely" in the last line of the first paragraph could best be replaced by which of the following?
 A. rectangularly B. geometrically
 C. simply D. solidly
18. Which of the following is NOT given as an example of a qualitative variable?
 A. College major B. Gender
 C. Type of personality D. Height
19. Which of the following statements about descriptive statistics is best supported by the passage?
 A. It solves all numerical problems.
 B. It leads to increased variability.
 C. It changes qualitative variables to quantitative variables.
 D. It simplifies unwieldy masses of data.
20. According to the passage, what is the purpose of examining a sample of a population?
 A. To consider all the quantitative variables
 B. To compare different groups
 C. To tabulate collections of data
 D. To predict characteristics of the entire population