

# 國立暨南國際大學外國語文學系

## 102 學年度碩士班入學甄試（語言學組）試題

考試科目：英文（50%一般英文；50%英文作文）

Part A: Reading Comprehension (50%)

### Questions 1—5

The Richter scale is a numerical logarithmic scale developed and introduced by American seismologist Charles R. Richter in 1935. The purpose of the scale is to measure the amplitude of the largest trace recorded by a standard seismograph one hundred kilometers from the epicenter of an earthquake. Tables have been formulated to demonstrate the magnitude of any earthquake from any seismograph. For example, for a one-unit increase in magnitude, there is an increase of times thirty in released energy. To put that another way, each number on the Richter scale represents an earthquake ten times as strong as one of the next lower magnitude. Specifically, an earthquake of magnitude 6 is ten times as strong as an earthquake of magnitude 5.

The Richter scale considers earthquakes of 6.75 as great and 7.0 to 7.75 as major. An earthquake that reads 4 to 5.5 would be expected to cause localized damage, and those of magnitude 2 may be felt. It is estimated that almost one million earthquakes occur each year, but most of them are so minor that they pass undetected. In fact, more than one thousand earthquakes of a magnitude of 2 or less occur every day.

1. What does this passage mainly discuss?
  - (A) Earthquakes
  - (B) The Richter scale
  - (C) Charles F. Richter
  - (D) Seismography
2. In what kind of textbook would this passage most likely be found?
  - (A) History
  - (B) Biography
  - (C) Geology
  - (D) Mathematics
3. According to information in the passage, what does the Richter scale record?
  - (A) The distance from the epicenter
  - (B) The amplitude of the largest trace

- (C) The degree of damage
  - (D) The location of the epicenter
4. How does each number on the Richter scale compare?
- (A) Each number is one hundred times as strong as the pervious number.
  - (B) Each magnitude is ten times stronger than the previous magnitude.
  - (C) The strength of each magnitude is one less than the previous magnitude.
  - (D) The scale decreases by five or six for each number.
5. The author mentions all of the following in the explanation of the Richter scale EXCEPT
- (A) it was introduced in 1935
  - (B) it was developed by an American seismologist
  - (C) it detects all earthquakes
  - (D) it measures the magnitude of earthquakes

**Questions 6—10**

Alzheimer's disease impairs a person's ability to recall memories, both distant and as recent as a few hours before. Although there is not yet a cure for the illness, there may be hope for a cure with a protein called nerve growth factor. The protein is produced by nerve cells in the same region of the brain where Alzheimer's occurs. Based on this relationship, scientists from the University of Lund in Sweden and the University of California at San Diego designed an experiment to test whether doses of nerve growth factor could reverse the effects of memory loss caused by Alzheimer's. Using a group of rats with impaired memory, the scientists gave half of the rats doses of nerve growth factor while giving the other half a blood protein as a placebo, thus creating a control group. At the end of four-week test, the rats given the nerve growth factor performed equally to rats with normal memory abilities. While the experiments do not show that nerve growth factor can stop the general process of deterioration caused by Alzheimer's, they do show potential as a means to slowing the process significantly.

6. With what topic is this passage mainly concerned?
- (A) Impaired memory of patients
  - (B) Cures for Alzheimer's disease
  - (C) The use of rats as experimental subjects
  - (D) Nerve growth factor as a cure for Alzheimer's

7. According to the passage, where is the nerve growth factor produced in the body?
- (A) In nerve cells in the spinal column
  - (B) In red blood cells in the circulatory system
  - (C) In nerve cells in the brain
  - (D) In the pituitary gland
8. Which of the following can be inferred from the passage?
- (A) Alzheimer's disease is deadly.
  - (B) Though unsuccessful, the experiments did show some benefits derived from nerve growth factor.
  - (C) The experiments did not show any significant benefits from nerve growth factor.
  - (D) More work needs to be done to understand the effects of nerve growth factor.
9. The passage most closely resembles which of the following patterns of organization?
- (A) Chronological order
  - (B) Statement and illustration
  - (C) Cause/effect
  - (D) Alphabetical order
10. The relationship between nerve growth factor and a protein is similar to the relationship between Alzheimer's and:
- (A) Forgetfulness
  - (B) A disease
  - (C) A cure
  - (D) A cancer

#### Questions 11—15

The influenza virus is a single molecule composed of millions of individual atoms. Although bacteria can be considered a type of plant, secreting poisonous substances into the body of the organism they attack, viruses, like the influenza virus, are living organisms themselves. We may consider them regular chemical molecule since they have strictly defined atomic structure; but on the other hand, we must also consider them as being alive since they are able to multiply in unlimited quantities.

An attack brought on by the presence of the influenza virus in the body produces a temporary immunity, but, unfortunately, the protection is against only the type of virus that caused the influenza. Because the disease can be produced by any one of three types, referred to as A, B, or C, and many strains within each type, immunity to

one virus will not prevent infection by another type or strain.

Approximately every ten years, worldwide epidemics of influenza called pandemics occur. Thought to be caused by new strains of type A virus, these pandemic viruses have spread rapidly, infecting millions of people. Epidemics or regional outbreaks have appeared on the average every two or three years for type-A virus, and every four or five years for type-B virus.

11. With what topic is the passage primarily concerned?
  - (A) The influenza virus
  - (B) Immunity to disease
  - (C) Bacteria
  - (D) Chemical molecules
12. According to this passage, bacteria are
  - (A) poisons
  - (B) very small
  - (C) larger than viruses
  - (D) plants
13. Why does the writer say that viruses are alive?
  - (A) They have a complex atomic structure.
  - (B) They move.
  - (C) They multiply.
  - (D) They need warmth and light.
14. The atomic structure of viruses
  - (A) is variable
  - (B) is strictly defined
  - (C) cannot be analyzed chemically
  - (D) is more complex than that of bacteria
15. The author names all of the following as characteristics of pandemics EXCEPT
  - (A) they spread very quickly
  - (B) they are caused by type-A virus
  - (C) they are regional outbreaks
  - (D) they occur once every ten years

**Questions 16—20**

It has been noted that, traditionally, courts have granted divorces on fault

grounds: one spouse is deemed to be at fault in causing the divorce. More and more today, however, divorces are being granted on a no-fault basis.

Proponents of no-fault divorce argue that when a marriage fails, it is rarely the case that one marriage partner is completely to blame and the other blameless. A failed marriage is much more often the result of mistakes by both partners.

Another argument in favor of no-fault divorce is that proving fault in court, in a public arena, is a destructive process that only serves to lengthen the divorce process and that dramatically increases the negative feelings present in a divorce. If a couple can reach a decision to divorce without first deciding which partner is to blame, the divorce settlement can be negotiated more easily and equitably and the postdivorce healing process can begin more rapidly.

16. What does the passage mainly discuss?
  - (A) Traditional grounds for divorce
  - (B) Who is at fault in a divorce
  - (C) Why no-fault divorces are becoming more common
  - (D) The various reasons for divorces
17. According to the passage, no-fault divorces
  - (A) are on the increase
  - (B) are the traditional form of divorce
  - (C) are less popular than they used to be
  - (D) were granted more in the past
18. It is implied in the passage that
  - (A) there recently has been a decrease in no-fault divorces
  - (B) not all divorces today are no-fault divorces
  - (C) a no-fault divorce is not as equitable as a fault divorce
  - (D) people recover more slowly from a no-fault divorce
19. The passage states that a public trial to prove the fault of one spouse can
  - (A) be satisfying to the wronged spouse
  - (B) lead to a shorter divorce process
  - (C) reduce negative feelings
  - (D) be a harmful process
20. The tone of this passage is
  - (A) emotional
  - (B) enthusiastic

- (C) expository
- (D) reactionary

**Questions 21—25**

The idea of determinism, that no event occurs in nature without natural causes, has been postulated as a natural law yet is under attack on both scientific and philosophical grounds. Scientific laws assume that a specific set of conditions will unerringly lead to a predetermined outcome. However, studies in the field of physics have demonstrated that the location and speed of minuscule particles such as electrons are the result of random behaviors rather than predictable results determined by pre-existing conditions. As a result of these studies, the principle of indeterminacy was formulated in 1925 by Werner Heisenberg. According to this principle, only the probable behavior of an electron can be predicted. The inability to absolutely predict the behavior of electrons casts doubt on the universal applicability of a natural law of determinism. Philosophically, the principal opposition to determinism emanates from those who see humans as creatures in possession of free will. Human decisions may be influenced by previous events, but the ultimate freedom of humanity may possibly lead to unforeseen choices, those not preordained by preceding events.

- 21. It is implied in the passage that a natural law
  - (A) is something that applies to science only
  - (B) can be incontrovertibly found in the idea of determinism
  - (C) is philosophically unacceptable
  - (D) is a principle to which there is no exception
- 22. The word “unerringly” could be most easily replaced by
  - (A) fortunately
  - (B) effortlessly
  - (C) without mistake
  - (D) with guidance
- 23. The idea of determinism is refuted in this passage based on
  - (A) scientific proof
  - (B) data from the science and philosophy of determinism
  - (C) principles or assumptions from different fields of study
  - (D) philosophical doubt about free will
- 24. The word “minuscule” is closest in meaning to
  - (A) charged

- (B) fast-moving
- (C) circular
- (D) tiny

25. According to the passage, which of the following is NOT true about the principle of indeterminacy?

- (A) It was formulated based on studies in physics.
- (B) It is philosophically unacceptable.
- (C) It has been in existence for more than a decade.
- (D) It is concerned with the random behavior of electrons.

### **Part B. English Composition (50%)**

Do you agree or disagree with the following statement?

*A teacher should always stick to the subject matter of the course.*

Use specific reasons and examples to support your response.