

淡江大學 101 學年度博士班招生考試試題

系別：各學系、研究所

科目：英 文

考試日期：5 月 26 日 第 1 節

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I. Vocabulary (30%)

1. We must not let destruction of the environment be our _____ to the next generation.
(A) legacy (B) legend (C) agency (D) assertion
2. The hunter waited till the bear _____ from the forest.
(A) emigrated (B) excluded (C) extended (D) emerged
3. The lawmaker is a _____ of raising taxes.
(A) profound (B) proposal (C) proponent (D) prodigy
4. I have _____ for you in your fear about speaking in front of a group.
(A) criteria (B) novelty (C) empathy (D) fuss
5. Even though he was very angry, he acted with _____ without showing his emotion or yelling at his child.
(A) restraint (B) potential (C) ambiguity (D) dynamics
6. Car drivers must _____ to traffic rules; otherwise, they will be fined.
(A) averse (B) allude (C) adhere (D) access
7. Since he suffered a stroke, his health has _____.
(A) induced (B) declined (C) inclined (D) deduced
8. She has a unique _____ on European economic crisis.
(A) restrictive (B) speculate (C) respective (D) perspective
9. Unclean water _____ for the death of more than five million people around the world.
(A) subordinated (B) accounted (C) attributed (D) substituted
10. The author _____ all rights to the book in exchange for a million dollars.
(A) revolved (B) reinforced (C) replicated (D) relinquished
11. Hackers spread a _____ virus to destroy the computer
(A) simultaneous (B) supplemental (C) mandatory (D) malicious
12. His comments are _____, and we are not sure what he really means.
(A) equivalent (B) repulsive (C) manipulated (D) ambiguous
13. Members of _____ groups are prone to different treatment in society.
(A) serene (B) minority (C) versatile (D) obsolete
14. The dog attacked her and _____ injuries.
(A) inflicted (B) inquired (C) implicated (D) implemented
15. We should stop _____ on the basis of race, sex, gender, and age.
(A) deviation (B) divergence (C) discrimination (D) domination

II. Grammar and Sentence Structure (30%)

16. Anyone _____ further information can visit the website <http://theonlinedictionary.com>.
(A) who needing (B) needing (C) which needs (D) to need

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本試題雙面印刷

淡江大學 101 學年度博士班招生考試試題 1-2

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17. It was in Kaohsiung _____ the film was made.
(A) that (B) which (C) how (D) in where
18. If I _____ you, I would not miss the opportunity.
(A) am (B) was (C) were (D) be
19. _____ his failure, he never gave up.
(A) In spite (B) Despite (C) However, (D) Therefore,
20. China's economic boom is generating a _____ market at home.
(A) fast-grown (B) fast-growing (C) fastly-grown (D) fastly-growing
21. In learning a foreign language, the more you practice, _____ you learn.
(A) the well (B) better (C) the better (D) much
22. _____ with a debt of \$100,000, James has taken an extra job.
(A) Facing (B) Face (C) To Face (D) Faced
23. _____ he doesn't make a lot of money, he donates regularly to the charity organization.
(A) Because (B) Due to (C) Whereas (D) Even
24. It made me _____ to hear how she had been insulted.
(A) worrying (B) worried (C) anger (D) angrily
25. There are _____ cars parking in the lot.
(A) a little (B) much (C) a few (D) little
26. Stevenson is an architect _____ designs have won international praise.
(A) whose (B) which (C) who (D) whom
27. He poured small _____ of tea into the cup.
(A) number (B) numbers (C) amounts (D) amount
28. It _____ that the damage caused by the typhoon is extensive.
(A) reports (B) is reported (C) has reported (D) is reporting
29. If you had been more careful, the accident _____ yesterday.
(A) wouldn't happen (B) won't happen (C) didn't happen (D) wouldn't have happened
30. I tried to explain _____, but she didn't listen.
(A) why was I late (B) why I was late (C) why did I be late (D) why may I be late

III. Reading Comprehension (10%)

Extending Human Longevity

How long can humans conceivably live? In most developed countries, life expectancy has grown steadily to an average of 75 years, with a privileged few making it past a century. But scientists are exploring ways to extend lifespan to lengths that would stun even those centenarians---120 years and beyond. Scientists also aim to reduce the burden of ill-health in old

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age, allowing people to retain their youthful energy to the end and be relieved of most symptoms that usually accompany old age.

Several studies show lifespans can be stretched far beyond normal limits. Cynthia Kenyon, a professor at the University of California in San Francisco, has managed to extend the lifespans of simple roundworms from two weeks to a month by altering the function of a single gene, known as *daf-2*. Even near death, these altered worms look better than normal worms half their age, with smooth fat bodies and a younger worm's agility. "It's amazing that they look so healthy," Kenyon said.

Mammals have two genes, both conserved during evolution, that are very similar to the *daf-2* gene. One is called an 'insulin receptor' which controls levels of blood sugar. By turning off this receptor in the fat cells of mice, scientists can increase their lifespans by up to 18 percent. Even longer lifespans are achieved by changing the other part of the *daf-2* gene that appears in mammals, which is known as 'insulin-like growth factor', or *IGF-1*. Reduce this gene's function and mice can live up to 33 percent longer than average. What causes these remarkable changes? Evidence suggests the mice suffer less cell and organ damage from oxygen-based substances which cause their health to disintegrate. The treatment seems to slow the eroding effects of oxygen on the body. The animals also have a lower risk of age-related diseases, including cancer. "They're more youthful, and so naturally more resistant to these diseases," Kenyon said.

Researchers have been looking at lifestyle changes that would allow humans to live longer. For more than 70 years, scientists have known that animal lifespans can be lengthened by decreasing the amount of food they eat. For example, mice fed 40 percent fewer calories (a calorie is a measure of the amount of energy supplied by food) live, on average, 40 percent longer than mice fed normal diets, and they look better, too. Limiting calories discourages the stimulation of the *IGF-1* pathway that seems to promote aging.

Can researchers exploit these discoveries and apply them to humans? Scientists don't know. UCLA evolutionary biologist John Phelan suggests a lean diet could increase a human's lifespan, but not as much relative to the mice. In Phelan's view, low-calorie diets extend longevity in mice and other animals primarily by reducing their sexual activity. Adult mice devote immense amounts of energy to producing a new generation. But when fed less, they mate less which saves a lot of energy and allows them to live longer, he says. Humans, on the other hand, are unlikely to achieve the same longevity benefit.

Severe dieting is probably not going to be compatible with most people's lifestyles. Phelan believes that living through years of misery in order to remain extremely thin is going to add only a minimal amount to a person's lifetime. Other researchers aren't so sure. They caution that more data on larger animals is needed before any guidelines are set. Donald Ingram, acting chief of the Laboratory for Experimental Gerontology at the National Institute of Aging, investigates the effects of a 30 percent calorie-reduced diet in monkeys, which are similar to humans in many ways. It's too

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soon to tell if the animals will live longer since a monkey's typical lifespan is 40 years and the study began in 1987, but initial indicators show a reduction in age-related disease risks in these animals.

"But we just don't know enough yet about how much longer large animals might live on a calorie-restricted diet," Ingram said. For the moment, some people are taking the idea seriously and eating less in hopes that they may live longer---perhaps to 120!

31. The purpose of the reading is to _____.

- (A) describe the effects of a reduced-calorie diet on monkeys
- (B) explain how scientists are trying to expand the human lifespan
- (C) show what life is like for people over 100 years old
- (D) describe how the daf-2 gene works in humans

32. In paragraph 1, line 4, the word *centenarians* means _____.

- (A) older people who are in good health
- (B) scientists who study how people can live longer
- (C) people who live to be at least 100
- (D) people who use life-extending advances

33. In paragraph 2, line 4, the word *their* refers to _____.

- (A) humans (B) animals (C) altered worms (D) normal worms

34. What is the main idea of paragraph 4?

- (A) Taking in calories releases insulin in the body.
- (B) Humans should eat 40% fewer calories.
- (C) Insulin seems to promote aging.
- (D) Mice that eat less live longer.

35. Using the theory in paragraph 4, reducing a monkey's diet by 30 percent will allow it to live _____ longer.

- (A) 18 percent (B) 30 percent (C) 33 percent (D) 40 percent

IV. Essay Writing (30%): Nowadays, people have more environmental awareness, in particular the conservation of natural resources. Please write a three-paragraph essay on the topic of "Green Living." More specifically, what is green living, what are the reasons for green living, and how can people lead a green living?