

系所組別： 全校

考試科目： 英文(B)

考試日期： 0220，節次： 4

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<注意事項>

前面 1-30 題共 60 分單選選擇題是電腦閱卷，需另外劃記在答案卡上，請注意題號作答。後面 31-38 題共 40 分非選擇題，請在所附的答案卷本上作答。

I. **Reading comprehension** 閱讀測驗共 10 題，每題 2 分。

It pays to give. Adapted from <http://www.economist.com/whichmba/it-pays-to-give>

In October 2007, Radiohead, a British rock group, released its first album in four years, "In Rainbows", as a direct digital download. The move drew a fair bit of attention not only because it represented a technological thumb in the eye to the traditional music industry, but also because the band allowed listeners to pay whatever they wished for it. Some 60% of those who seized the opportunity paid nothing at all, but the band seemed pleased with the result; one estimate had it earning nearly \$3m from the experiment.

One group outside the music industry taking an interest was a trio of professors then at the Rady School of Management at the University of California, San Diego: Ayelet Gneezy, Uri Gneezy and Leif Nelson (who is now at the Haas School of Business at the University of California, Berkeley). Inspired, they designed a series of experiments to gauge whether pay-what-you-want pricing would work for other businesses. Their most recent experiment, co-authored with Amber Brown of Disney Research and published in *Science*, also stirred in a new element: would it make any difference if firms donated some of the pay-what-you-want fee to charity?

The authors set up their pricing experiment at the exit of a roller-coaster ride at a large amusement park. Riders were offered a photograph of themselves, snapped mid-coast. The usual price was \$12.95, but on one day, riders were told they could pay what they wished, including taking the photo for free. A second group was charged the full price but told that half the money would go to a well-regarded health charity. Yet a third group could set the price and see half of their chosen amount donated.

Allowing customers to set the price dramatically increased the percentage of buyers—from less than 1% to 8%. Even accounting for those who took a free photo, the amusement park collected more revenue on the pay-what-you-want day than when selling for the usual fixed price.

The authors also found that of the customers who were allowed to pay what they want, those who were told that half the money would go to a good cause paid substantially more than those who were not told about the charitable donation—to the point that revenue more than tripled. (The charity did, indeed, get its promised cut.) The smallest number of purchases, meanwhile, came the day that customers had to pay the full \$12.95 but half was donated.

Therefore more than simple altruism was motivating the customers who gave money for a photo they could have had for free. "One of the quirks about paying what you want," suggests Mr. Nelson, "is that it starts to signal something about who you are. Every dollar you spend is a direct reflection of how much you care about this charity and what kind of person you are. No one wants to go cheap with a charity." He calls this phenomenon "shared social responsibility": instead of passively accepting a firm's assertion of its charitable donations, the customer must actively agree to give money to charity, and determine how much.

But how widespread could shared social responsibility be? Ms. Gneezy is the first to point out that customer-determined pricing works best for products with low marginal costs. Since publishing their findings, the researchers have spoken to several companies interested in pursuing similar experiments with their products, including software developers and video-game designers. But offering flexible pricing on a virtual product online, instead of in person at an amusement park, may make it easier for people to "go cheap" even if a charity is involved. Combining customer-determined pricing, corporate social responsibility, and increased profits will be tricky to pull off, and not every company will be able to do it—just like not every band can put their album online for free and still profit.

(背面仍有題目,請繼續作答)

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1. What is the main idea of the passage?
 - (a) Allowing consumers to set their own prices can be good for business; even better if the firms give some of it to charity.
 - (b) It would be profitable in music industry if consumers can decide how much money they pay and donate to the charity.
 - (c) Companies of a large amusement park would triple the revenue if they allow customers to choose how much money they want to pay.
 - (d) The British rock group broke the tradition of listening music through disc and having flexible prices that consumers can take charge of.
2. According to the passage, which choice was favored by consumers?
 - (a) Consumers could play roller-costar with any fee they wanted and take a photo for free.
 - (b) Consumers were charged the full price but told that half the money would go to a charitable institution.
 - (c) Half of the price consumers determined would be donated to the charitable institution.
 - (d) The original choice of \$12.95 was still favored by consumers.
3. It can be inferred from the experiment that
 - (a) Consumers would like to pay and donate the money that is reasonable.
 - (b) Consumers would not want to purchase things that are too expensive.
 - (c) Consumers are sometimes too kind to help those in need.
 - (d) If having choices, consumers would choose things that are free.

One step closer to a second earth

By Michael Lemonick. Adapted from

<http://www.time.com/time/health/article/0,8599,2041683,00.html#ixzz1AhtlQ9wf>

For the past two years, NASA's orbiting Kepler telescope has been peering, unblinking, at some 150,000 stars lying just under the wing of the swan in the constellation Cygnus, about 560 light-years away. The probe has been looking for tiny, regular dips in brightness that might signal the presence of a planet passing in front of the star and blocking a fraction of the light.

It's clear they're out there: several so-called exoplanets have revealed their existence to Kepler. None so far, however, has lived up to the ultimate goal of the mission: to find truly Earthlike planets — places small enough and temperate enough to be hospitable to life.

But the planet just announced in Seattle by the Kepler team at the annual American Astronomical Society Meeting is a huge step closer. Called Kepler-10b, it's just 40% larger than Earth — the smallest planet yet found outside our solar system. Not only that: unlike the vast majority of the 500-odd exoplanets found to date, and unlike Jupiter and Neptune, Kepler-10b isn't just a huge ball of gas or ice. Like Earth, it's made of rock. "This is a historic discovery," said Geoff Marcy of the University of California, Berkeley, at a press conference introducing the new planet.

He wasn't really talking about the planet itself, which couldn't possibly harbor life. The main problem is that it's less than 2 million miles (3.2 million km) away from its host star, compared with Earth's 93 million-mile (150 million km) distance from the sun. "The temperature on the sunlit side," said Natalie Batalha of NASA's Ames Research Center in California, who is deputy leader of the Kepler Science Team, "is about 2500°Fahrenheit, which is hotter than lava."

But the fact that it's made of rock, like the only habitable planet we know about — ours — is a huge deal. Astronomers have always assumed that such planets probably do exist, but assumptions aren't always the best idea in a field where the greatest discoveries often come from completely out of left field. They know this one is rocky because they know not only the planet's size, based on how much starlight it blocked, but also its mass. That measurement came not from Kepler but from the ground-based Keck telescope in Hawaii, which measured the minute back-and-forth wobbling of the star as Kepler-10b's

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gravity tugged on it. (Another planet, called Corot-7b, discovered a year or two ago by a European team, might be rocky as well, but the wobble measurements aren't precise enough to say for sure.)

Combine size and mass, and you've got the planet's density. Kepler-10b's is about 1.6 times greater than Earth's, or about "the density of an iron dumbbell," said Batalha. "That doesn't mean it's actually made of iron — 10b has more powerful gravity, so it squeezes itself tighter than Earth does. But it could certainly have a higher proportion of iron than Earth does."

The other big deal is that Kepler is sensitive enough to have found something this small. On top of that, Kepler's measurements of the star fell within a margin of error of just a few percent. If you want to know exactly how big a planet is, you need to know exactly how big the star is whose light it's blocking. If Kepler can find a planet as small as 10b, it can certainly find one that's smaller. And if it watches long enough, it can find one that's not only the size of Earth but also in a nice temperate orbit — a true twin of Earth.

That won't come for another year or two. In the meantime, though, the Kepler team is getting ready for yet another big announcement just a few weeks from now. The team isn't giving any hints as to what it will be. But given that the satellite has proved it's the world's most powerful planet-finding machine, it will undoubtedly make a few headlines.

4. The passage mainly talks about
- A discovery of a newborn planet like earth.
 - An observation of an earth-like planet.
 - A finding of a smaller planet outside the solar system.
 - A discussion of a new planet inside the solar system.
5. What is the feature of Kepler-10b?
- It is suitable for humans.
 - It is mostly made of lava.
 - The surface temperature is hotter than on earth.
 - It has smaller gravity.
6. The passage answered which of the following questions?
- What was the history of Kepler?
 - How Kepler find another earth from measuring mass?
 - What were the major findings of Kepler?
 - How Kepler find small planets?
7. The phrase "on top of that" in the second to the last paragraph probably means
- above
 - besides
 - except
 - although

The origins of cetaceans Adapted from TOEFL official guide

It should be obvious that cetaceans-whales, porpoises, and dolphins-are mammals. They breathe through lungs, not through gills, and give birth to live young. Their streamlined bodies, the absence of hind legs, and the presence of a fluke and blowhole cannot disguise their affinities with land dwelling mammals. However, unlike the cases of sea otters and pinnipeds (seals, sea lions, and walruses, whose limbs are functional both on land and at sea), it is not easy to envision what the first whales looked like. Extinct but already fully marine cetaceans are known from the fossil record. How was the gap between a walking mammal and a swimming whale bridged? Missing until recently were fossils clearly intermediate, or transitional, between land mammals and cetaceans.

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Very exciting discoveries have finally allowed scientists to reconstruct the most likely origins of cetaceans. In 1979, a team looking for fossils in northern Pakistan found what proved to be the oldest fossil whale. The fossil was officially named *Pakicefus* in honor of the country where the discovery was made. *Pakicetus* was found embedded in rocks formed from river deposits that were 52 million years old. The river that formed these deposits was actually not far from an ancient ocean known as the Tethys Sea.

The fossil consists of a complete skull of an archaeocyte, an extinct group of ancestors of modern cetaceans. Although limited to a skull, the *Pakicetus* fossil provides precious details on the origins of cetaceans. The skull is cetacean-like but its jawbones lack the enlarged space that is filled with fat or oil and used for receiving underwater sound in modern whales. *Pakicetus* probably detected sound through the ear opening as in land mammals. The skull also lacks a blowhole, another cetacean adaptation for diving. Other features, however, show experts that *Pakicetus* is a transitional form between a group of extinct flesh-eating mammals, the mesonychids, and cetaceans. It has been suggested that *Pakicetus* fed on fish in shallow water and was not yet adapted for life in the open ocean. It probably bred and gave birth on land.

Another major discovery was made in Egypt in 1989. Several skeletons of another early whale, *Basilosaurus*, were found in sediments left by the Tethys Sea and now exposed in the Sahara desert. This whale lived around 40 million years ago, 12 million years after *Pakicefus*. Many incomplete skeletons were found but they included, for the first time in an archaeocyte, a complete hind leg that features a foot with three tiny toes. Such legs would have been far too small to have supported the 50-foot-long *Basilosaurus* on land. *Basilosaurus* was undoubtedly a fully marine whale with possibly nonfunctional, or vestigial, hind legs.

An even more exciting finding was reported in 1994, also from Pakistan. The now extinct whale *Ambulocetus natans* ("the walking whale that swam") lived in the Tethys Sea 49 million years ago. It lived around 3 million years after *Pakicetus* but 9 million before *Basilosaurus*. The fossil luckily includes a good portion of the hind legs. The legs were strong and ended in long feet very much like those of a modern pinniped. The legs were certainly functional both on land and at sea. The whale retained a tail and lacked a fluke, the major means of locomotion in modern cetaceans. The structure of the backbone shows, however, that *Ambulocetus* swam like modern whales by moving the rear portion of its body up and down, even though a fluke was missing. The large hind legs were used for propulsion in water. On land, where it probably bred and gave birth, *Ambulocetus* may have moved around very much like a modern sea lion. It was undoubtedly a whale that linked life on land with life at sea.

8. What is the main idea of the passage?

- (a) Scientists have found much evidence of the connection between walking mammals and swimming whales.
- (b) The discovery of *Pakicefus* started the research on the connection between walking mammals and swimming whales.
- (c) Hind legs found in certain whales were a very important proof of the connection between walking mammals and swimming whales.
- (d) Archeologists often look for fossil record to trace the gap between two species.

9. The word "envision" in the last paragraph closely means

- (a) Describe
- (b) Imagine
- (c) Say
- (d) Draw

10. According to paragraph 3, *Pakicetus* is different from modern whales probably because

- (a) They have jaw bones.
- (b) They have ear.
- (c) They can raise their offspring both in sea and at land.
- (d) They can adjust life in the open ocean.

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II. Reassemble the sentences into unified and coherent passages. 組裝短文，請選擇正確的排列順序，共 10 題，每題 2 分。

11. By Alice Park. Adapted from Time magazine Sep. 13, 2010.

(A) The more active you keep your neural circuits throughout life, the less likely it is that your brain will succumb to dementia or Alzheimer's disease. (B) The findings imply that while brain exercises can hold off the symptoms of the neurological disorder for a while, they do not address its root cause. (C) In a new study of 1,157 mentally healthy volunteers over age 65, researchers found that while those who remained intellectually stimulated by reading, playing card games, listening to the radio or visiting museums were less likely to show symptoms of cognitive decline over a 12-year follow-up, they also showed significantly faster mental deterioration once they were diagnosed with dementia, compared with people who didn't engage in mentally stimulating activity. (D) That's because such activity may allow the brain to compensate for any initial biological changes related to dementia and mask the progression of the disease, say the scientists. (E) "Use it or lose it" is what doctors have been telling people who want to protect their brains from dementia in their golden years. (F) Or at least that's what doctors thought.

- 11.
- (a) CBADEF
 - (b) EFDCAB
 - (c) ABDEFC
 - (d) EAFDCB
 - (e) ACDEFB

12. Adapted from http://en.wikipedia.org/wiki/Social_psychology

(A) Despite their similarity, psychological and sociological researchers tend to differ in their goals, approaches, methods, and terminology. (B) Social psychologists' research tends to be empirical and quantitative, and it is often centered around laboratory experiments, but there are some computational modeling efforts in the field. (C) Scholars in social psychology, this interdisciplinary area, are typically either psychologists or sociologists, though all social psychologists employ both the individual and the group as their units of analysis. (D) Although there has been increasing isolation and specialization in recent years, some degree of overlap and influence remains between the two disciplines. (E) The greatest period of collaboration between sociologists and psychologists was during the years immediately following World War II. (F) They also favor separate academic journals and professional societies.

- 12.
- (a) CBAFED
 - (b) BDACEF
 - (c) BCDAEF
 - (d) EBCADF
 - (e) DECBFA

13. Adapted from <http://www.scientificamerican.com/article.cfm?id=blood-from-stone>

By Mary H. Schweitzer. December 6, 2010

(A) Each had a dark center resembling a cell nucleus (B) In fact, the spheres looked just like the blood cells in reptiles, birds and all other vertebrates alive today except mammals, whose circulating blood cells lack a nucleus (C) Peering through the microscope at the thin slice of fossilized bone, I stared in disbelief at the small red spheres a colleague had just pointed out to me (D) The tiny structures lay in a blood vessel channel that wound through the pale yellow hard tissue (E) They couldn't be cells, I told myself (F)

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The bone slice was from a dinosaur that a team from the Museum of the Rockies in Bozeman, Mont., had recently uncovered (G) —a *Tyrannosaurus rex* that died some 67 million years ago—and everyone knew organic material was far too delicate to persist for such a vast stretch of time

13.

- (a) FDECABG
- (b) DAEBCFG
- (c) DCGEFAB
- (d) CDFAGEB
- (e) CDAEBFG

14. Adapted from

<http://www.scientificamerican.com/article.cfm?id=more-vitamin-d-could-prevent-some-psychosis>

By JR Minkel. November 16, 2010

(A) The idea was first put forth more than a decade ago by schizophrenia researcher John McGrath of the University of Queensland in Australia. (B) Could some cases of schizophrenia boil down to something as simple as vitamin D deficiency? (C) Now McGrath and his colleagues have put the hypothesis to the test. (D) They analyzed blood samples taken from 424 Danish newborns who went on to develop schizophrenia as well as an equal number of babies who never acquired the disease. (E) It may be that a deficit of vitamin D leaves expecting mothers more vulnerable to illnesses such as influenza, which could in turn sensitize the maturing brain to stress-related damage later in life. (F) In each sample, they measured the amount of the chemical 25OHD, which the body converts into vitamin D. (G) The circumstantial evidence fit: people born in winter or spring or at high latitudes are at slightly increased risk of developing schizophrenia, and vitamin D deficiency is also more common in winter months and at high latitudes because of lack of sunlight.

14.

- (a) BAGECDF
- (b) BCADFGE
- (c) GABDCEF
- (d) EBDAFCG
- (e) GAEBFDC

15. Adapted from <http://www.scientificamerican.com/search/?q=Cyborg+Beetles&x=0&y=0>

By Michel M. Maharbiz and Hirotaka Sato. December 13, 2010

(A) One reason the fly is a master at evading the handheld swatter is that its wings beat remarkably fast—about 200 times a second. (B) The common housefly is a marvel of aeronautical engineering. (C) Rather the fly tenses and relaxes the muscles in rhythmic cycles that cause the thorax itself to change shape. (D) That deformation in turn sets the wings to oscillating, much the way a tuning fork vibrates after having been struck. (E) In this way, the fly manages to convert a tiny bit of energy into a whole lot of motion with very little effort. (F) To achieve this amazing speed, the fly makes use of complex biomechanics. (G) Its wings are not directly attached to the muscles of the thorax.

15.

- (a) BCDEGFA
- (b) BAFGCDE
- (c) AFGCEDB
- (d) EBDAFCG
- (e) DAEBFCG

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16. Adapted from

<http://www.scientificamerican.com/podcast/episode.cfm?id=womens-tear-contents-lesser-mens-se-11-01-06> By Cynthia Graber

(A) The researchers knew that mouse tears contain pheromones that convey information to other mice. (B) So they looked for similar kinds of signals in human tears. (C) Now researchers at the Weizmann Institute of Science in Israel find that women's emotional tears have definite physiological effects on men. (D) We produce tears in response to insults to the eyes—the sting of onion fumes, a tiny insect that flew into your cornea. (E) But we also produce emotional tears. (F) And it's long been known that emotional tears are chemically different from poke-in-the-eye tears. (G) The work appears in the journal *Science*. [Shani Gelstein et al, Human Tears Contain a Chemosignal]

16.

- (a) ACDEGFB
- (b) CAFGBDE
- (c) DEFCEGAB
- (d) DABEFCG
- (e) CGFABED

17. Adapted from

<http://www.scientificamerican.com/podcast/episode.cfm?id=young-great-white-shark-bite-isnt-t-10-12-03>
By Cynthia Graber

(A) They're everyone's worst nightmare when it comes to swimming in the ocean: great white sharks. (B) The finding may explain why the few shark attacks that do happen on people are rarely fatal—until it's pretty big, the great white's reputation is worse than its bite. (C) That's despite the fact that the number of fatal shark attacks annually can usually be counted on the fingers of one still attached hand. (D) Because it hasn't developed enough stiff, mineralized cartilage yet. (E) In research published in the *Journal of Biomechanics* [Stephen Wroe et al., article in press], scientists used 3-D computer models and advanced engineering techniques to study how sharks hunt and kill their food. (F) But the researchers were surprised to find that a shark less than three meters long only looks like it could manage that killer bite.

17.

- (a) BFACED
- (b) ECDAFB
- (c) AEFCEB
- (d) EBACDF
- (e) ACFDEB

18. Adapted from

http://www.time.com/time/specials/packages/article/0,28804,2036683_2037183_2037185,00.html#ixzz1AteE0ZiK

By Lev Grossman. Dec. 15, 2010

(A) Zuckerberg is part of the last generation of human beings who will remember life before the Internet, though only just. (B) It's a permanent fact of our global social reality. (C) He was born in 1984 and grew up in Dobbs Ferry, N.Y., the son of a dentist — Painless Dr. Z's slogan was, and is, "We cater to cowards." (D) Mark has three sisters, the eldest of whom, Randi, is now Facebook's head of consumer marketing and social-good initiatives. (E) Facebook has merged with the social fabric of American life, and not just American but human life: nearly half of all Americans have a Facebook account, but 70% of Facebook users live outside the U.S. (F) It was a supportive household that produced confident children. (G) We have entered the Facebook age, and Mark Zuckerberg is the man who brought us here.

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18.

- (a) ACDFEGB
- (b) ABGECFD
- (c) EBDACFG
- (d) GAEBCDF
- (e) EBGACDF

19. Adapted from

<http://www.scientificamerican.com/podcast/episode.cfm?id=imitate-an-accent-to-better-underst-10-12-08>

By Karen Hopkin

(A) Where was I? (B) Others were told to simply listen, or to repeat the sentence in their normal voice. (C) To find out how we can make sense of unfamiliar inflections, psychologists spoke to volunteers in an accent they'd invented. (D) Oh, I was saying that according to a new study, the key to understanding someone with a different accent is to repeat what he says and to approximate the accent. (E) Some subjects were told to imitate the odd sounds. (F) If you speak to people from different places, you've no doubt encountered a variety of interesting accents. (G) The work appears in the journal *Psychological Science*. [Patti Adank, Peter Hagoort and Harold Bekkering, "Imitation Improves Language Comprehension"]

19.

- (a) FGCD AEB
- (b) FGACDEB
- (c) ADGFCEB
- (d) GABDEFC
- (e) CFABEGD

20. Adapted from <http://www.scientificamerican.com/article.cfm?id=why-sleep-is-good-for-you>

By Carrie Arnold. January 11, 2011.

(A) The researchers, led by Lior Appelbaum and Philippe Mourrain of Stanford University, tagged the larvae neurons with a dye so that active neuron connections, or synapses, appeared green, whereas inactive ones appeared black. (B) A group of researchers recently tried to settle this debate by studying the larvae of a common see-through aquarium pet, the zebrafish. (C) Unlike humans, zebrafish larvae are transparent, which allowed researchers to watch their brains as they slept. (D) Like humans, zebrafish are active during the day and sleep at night. (E) After following the fluctuations of these synapses over the course of a day, the team found that the zebrafish did indeed have lower overall synapse activity during sleep. (F) Decreased synaptic activity would show that sleep pruned unnecessary memory connections, whereas memory consolidation would have a different pattern.

20.

- (a) EDCBAF
- (b) BADCEF
- (c) FBACDE
- (d) BDCAFE
- (e) ABDECF

III. Vocabulary 詞彙測驗，請選擇適當的詞意。共 10 題，每題 2 分。Adapted from "Nature" <http://www.nature.com/news/2011/110110/full/469146a.html>

By Daniel Cressey..

Plans for marine protection highlight science gap.

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Facing a host of threats including fishery devastation and the destruction of coral reefs, conservationists have increasingly (21)pinned their hopes on marine protected areas (MPAs). More than 5,000 of these (22)sanctuaries, where fishing is controlled to limit its effect on biodiversity, have been set up, mainly in coastal zones. They range in size from less than 10,000 square metres to the vast Phoenix Islands area, part of the Republic of Kiribati in the Pacific Ocean, which tops 400,000 square kilometres.

But, in the rush to safeguard marine ecosystems, there has been little scientific (23)assessment of how to create a successful MPA. With a new wave of MPAs expected to be created in deep-ocean regions in the next few years, scientists are eager to understand how factors such as size and siting can determine a protected area's success or failure.

Tundi Agardy, an environmental consultant based in Colrain, Massachusetts, is the lead author of a paper published in *Marine Policy*, which warns of a "blind faith" in the ability of MPAs to stem biodiversity loss. She told *Nature* that she can name only "a (24)handful" of areas that actually work as advertised. Her paper identifies five possible (25)shortcomings in MPAs: many are too small to be effective; they may simply drive fishing into other areas; they create an (26)illusion of protection when none is actually occurring; many are poorly planned or managed; and they can fail all too easily because of environmental (27)degradation of waters just outside the protected area.

"I'd (28)venture a guess that a majority of the world's several thousand MPAs have one flaw or another relating to the five categories we describe," says Agardy. For example, an MPA created to protect the vaquita (*Phocoena sinus*), a small porpoise found only in the Gulf of California, actually missed a sizeable proportion of the species' core range. The animal's numbers have continued to decline and it is now the most endangered marine mammal in the world.

"We still need a lot of knowledge to really understand how MPAs work exactly," says Frederic Vandeperre, a marine biologist at the University of the Azores in Horta who last month published an analysis of seven southern European MPAs. The study showed that these MPAs can benefit fisheries in (29)adjacent waters, but that the degree of the effect depends heavily on the size of the area and the quality of its management. Vandeperre says that each MPA needs a unique design, depending on its goals. For example, those that (30)explicitly aim to safeguard fishing yields need to cover a larger area.

21. pinned
(a) fastened
(b) placed
(c) identified
(d) expected

25. shortcomings
(a) defects
(b) points
(c) advantages
(d) problems

29. adjacent
(a) clean
(b) complacent
(c) viable
(d) neighboring

22. sanctuaries
(a) asylum
(b) home
(c) area
(d) space

26. illusion
(a) completion
(b) allusion
(c) deception
(d) indifference

30. explicitly
(a) extraordinary
(b) complicit
(c) concrete
(d) definitive

23. assesment
(a) investment
(b) investigation
(c) discovery
(d) resolution

27. degradation
(a) downfall
(b) desolation
(c) rehabilitation
(d) formation

24. handful
(a) near
(b) hard
(c) quick
(d) a few

28. venture
(a) consider
(b) explain
(c) gamble
(d) make up

(背面仍有題目,請繼續作答)

系所組別： 全校

考試科目： 英文(B)

考試日期： 0220，節次： 4

※ 考生請注意：本試題 可 不可 使用計算機

III. Translation 中翻英。共 8 題，每題 5 分。

31. 亞洲主要位於西北半球，是世界上面積最大，居住人口最多的一洲。它涵蓋了地球 8.6% 的表面積(或者是 29.9% 的陸地面積)及大約 40 億人口，也就是目前六成的世界人口。
32. 地理學可以廣義地分為兩類:人文地理學及自然地理學。前者大多著重於已創造的環境、空間如何被人類創造、審視和經營，以及人們對所在的空間產生的影響。後者檢視自然環境、氣候、植被、生命、土壤、水和地形如何形成及如何互相影響。
33. 因為這兩類地理學使用不同的方法，於是一個融合兩類的另一個方法出現了：環境地理學。環境地理學不但結合了前面兩種分類，且觀察環境和人類間的互動。
34. 物理學是研究空間裡的物質及其運動，和其它相關的概念(包含能量及力量)的自然科學。在 19 及 20 世紀，物理結合了科學的哲學，並解釋周遭的自然現象，形成了一門專業。
35. 本研究主要觀察在台外籍新娘子女的家庭環境及其學校生活適應的情況，並探討其間的脈絡及關聯。研究結果以三個家庭為起點，延伸至學校生活經驗。透過整個脈絡，勾勒出他們家庭環境及學校生活的圖像。Adapted from <http://nccur.lib.nccu.edu.tw/handle/140.119/39124>
36. 台灣的經濟奇蹟使輕重工業蓬勃發展，但環境因此受到負面的衝擊。空氣污染日益嚴重；許多文獻已證實空氣污染物對於人體健康產生不良的影響。本文以週歲內的嬰兒為研究對象，根據 1995 年至 2003 年空氣污染數據及同時期新生兒出生與死亡資料，分析空氣污染物懸浮微粒、二氧化硫及二氧化氮對於週歲內的嬰兒是否造成呼吸道疾病死亡率上升。Adapted from <http://ir.lib.ncu.edu.tw/handle/987654321/12769>
37. 本研究探討老人在長期照護機構的生活滿意度和相關因素，包含健康及生活適應狀況。以立意取樣，選取台中市十家長期照護機構，符合收案標準之 101 位老人為研究對象。本研究結果可提供長期照護機構規劃及評量的指標，並且為提升照護品質等相關服務及政策之參考依據。使長期照護機構的老人可以獲得適當的照顧，而有更好的生活滿意度。Adapted from <http://ir.cmu.edu.tw/ir/handle/310903500/24204>
38. 本論文主要的目標為研究語音辨識技術，發展一套相容性高、靈活、實用及辨識率佳的語音關鍵詞辨識擷取系統。此系統中，我們使用 HTK 工具開發 HMM 來建立聲學模型。並以 21 個聲母、36 個韻母所組成的 411 個音節，訓練出一個以 HMM 狀態數、高斯混合數分別為 6、17 的最佳聲學模型，建構出一套語音關鍵詞辨識擷取系統。此外，將設計其介面程式以利使用者操作。Adapted from <http://ir.lib.ncu.edu.tw/ir/handle/987654321/8363>