

41-44 為題組

There is a long-held belief that when meeting someone, the more eye contact we have with the person, the better. The result is an unfortunate tendency for people making initial contact—in a job interview, for example—to stare fixedly at the other individual. However, this behavior is likely to make the interviewer feel very uncomfortable. Most of us are comfortable with eye contact lasting a few seconds. But eye contact which persists longer than that can make us nervous.

Another widely accepted belief is that powerful people in a society—often men—show their dominance over others by touching them in a variety of ways. In fact, research shows that in almost all cases, lower-status people initiate touch. Women also initiate touch more often than men do.

The belief that rapid speech and lying go together is also widespread and enduring. We react strongly—and suspiciously—to fast talk. However, the opposite is a greater cause for suspicion. Speech that is slow, because it is laced with pauses or errors, is a more reliable indicator of lying than the opposite.

語譯及解釋

長久以來據信人與人見面時,眼神接觸越久越好,結果,人們在與人初接觸時——譬如在工作面試時——不幸地往往會緊盯著對方,然而,這樣的行為可能會讓面試官感到很不自在,我們大多數人對於持續幾秒的眼神接觸覺得自在,但持續的眼神接觸若超過那段時間則會使我們緊張。

另一種廣泛接受的看法是,社會上有權勢者——常是男性——他們會以不同方式與他人接觸,以展示自身優勢,事實上,研究顯示,幾乎所有情況下,都是由地位較低的人主動展開接觸,而女性較男性更常主動展開接觸。

講話速度快和說謊相伴隨,此觀念也很普遍並持續已久,對快速講話我們反應強烈並存疑慮,然而,相反地說話慢才是令人起疑較大的原因,講話慢是因為話中會夾雜停頓

或錯誤,因此要比其反面(講話快)更能作判定說謊的可靠指標。

long-held 長期持有的 ; tendency 趨勢

initial 最初的 initiate 發起,開始

stare at 凝視(= gaze at) ; fixedly 目不轉睛地

persist 持續(存在)(= last; continue; endure)

dominance 優勢 ; status 地位 ; widespread 廣泛的

react to(介詞) + O. ; suspiciously 懷疑地 suspicion(n.)懷疑

be laced with 夾雜 ; reliable (=dependable; trustworthy)

indicator 指示信號 ; instinct 本能,天性 ; interpret 口譯

verbal 言語的

( )41. Which of the following statements is true according to the passage?

- (A) Rapid speech without mistakes is a reliable sign of intelligence.
- (B) Women often play a more dominant role than men in a community.
- (C) Speaking slowly is more often a sign of lying than speaking quickly.
- (D) Touching tends to be initiated first by people of higher social positions.

選(C)理由：Speech that is slow, because it is laced with pauses or errors, is a more reliable indicator of lying than the opposite.

( )42. What is true about fixing your eyes on a person when you first meet him/her?

- (A) Fixing your eyes on the person will make him/her feel at ease.
- (B) It is more polite to fix your eyes on him/her as long as you can.
- (C) Most people feel uneasy to have eye contact for over a few seconds.
- (D) It doesn't make a difference whether you fix your eyes on him/her or not.

選(C)理由：Most of us are comfortable with eye contact lasting a few seconds. But eye contact which persists longer than that can make us nervous.

( )43. Which of the following is **NOT** discussed in the passage?

- (A) Facial expressions.
- (B) Physical contact.
- (C) Rate of speech.
- (D) Eye contact.

選(A)理由：文中提到眼神接觸及時間長短、說話速度，但未提及面部表情。

( )44. What is the main idea of the passage?

- (A) People have an instinct for interpreting non-verbal communication.
- (B) We should not judge the intention of a person by his body language.
- (C) A good knowledge of body language is essential for successful communication.
- (D) Common beliefs about verbal and non-verbal communication are not always correct.

選(D)理由：本文對 a long-held belief(長久持有的深信看法)提出反駁,認為結果其實並非如此,並舉眼神接觸時間及說話速度為例。

#### 45-48 為題組

It is easy for us to tell our friends from our enemies. But can other animals do the same? Elephants can! They can use their sense of vision and smell to tell the difference between people who pose a threat and those who do not.

In Kenya, researchers found that elephants react differently to clothing worn by men of the Maasai and Kamba ethnic groups. Young Maasai men spear animals and thus pose a threat to elephants; Kamba men are mainly farmers and are not a danger to elephants.

In an experiment conducted by animal scientists, elephants were first presented with clean clothing or clothing that had been worn for five days by either a Maasai or a Kamba man. When the elephants detected the smell of clothing worn by a Maasai man, they moved away from the smell faster and took longer to relax than when they detected the smells of either clothing worn by Kamba men or clothing that had not been worn at all.

Garment color also plays a role, though in a different way. In the same study, when the elephants saw red clothing not worn before, they reacted angrily, as red is typically worn by Maasai men. Rather than running away as they did with the smell, the elephants acted aggressively toward the red clothing.

The researchers believe that the elephants' emotional reactions are due to their different interpretations of the smells and the sights. Smelling a potential danger means that a threat is nearby and the best thing to do is run away and hide. Seeing a potential threat without its smell means that risk is low. Therefore, instead of showing fear and

running away, the elephants express their anger and become aggressive.

語譯及解釋

我們容易分辨朋友和敵人,但其他動物同樣也能嗎?大象就可以!牠們能用自己的視覺和嗅覺區分造成威脅的人與不具威脅者。

在肯亞,研究員發現,大象對馬賽族和康巴族男人所穿的衣服有不同反應,年輕的馬賽族男人會用矛刺動物,因而對大象造成威脅,康巴族男人主要是農夫,因此對大象不會造成危險。

一項由動物科學家執行的實驗中,他們先將乾淨衣物或馬賽族男人或康巴族男人穿5天的衣物展示給大象,相較於聞到康巴族男人穿過或完全沒人穿過的衣物,大象察覺到馬賽族男人所穿過衣物的味道時,就會很快遠離這個氣味,並花較長時間才能放鬆。

雖然方式不同,服裝的顏色也會發揮作用,在相同研究中,大象看到先前沒人穿過的紅衣時會有生氣的反應,因為紅色是馬賽族男人的典型穿著,不但聞到該氣味時沒有逃跑,大象反而對紅色衣物有攻擊的行動。

研究員相信,大象的情緒反應源於牠們對氣味和視覺不同的詮釋,聞到潛在的危險意味著威脅就在附近,最好跑走、躲起來,看到潛在的威脅而聞不到它的氣味意味著風險低,因此,沒有表現出恐懼並逃跑,大象反而表達牠們的憤怒,變得有攻擊性。

tell (/distinguish / separate) A from B : 區分 A 與 B

pose 造成(威脅) ; ethnic 種族的 ; spear 用矛刺

present A with B : 將 B 交付予 A ; detect 偵測 ; garment 衣服(可數)

typically 典型地 ; aggressive 有侵略性的 ; potential 潛在的



scent 氣味 ; sharp 敏銳的

- ( )45. According to the passage, which of the following statements is true about Kamba and Maasai people?
- (A) Maasai people are a threat to elephants.
  - (B) Kamba people raise elephants for farming.
  - (C) Both Kamba and Maasai people are elephant hunters.
  - (D) Both Kamba and Maasai people traditionally wear red clothing.

選(A)理由：文中指出 Young Maasai men spear animals and thus pose a threat to elephants.

- ( )46. How did the elephants react to smell in the study?
- (A) They attacked a man with the smell of new clothing.
  - (B) They needed time to relax when smelling something unfamiliar.
  - (C) They became anxious when they smelled Kamba-scented clothing.
  - (D) They were frightened and ran away when they smelled their enemies.

選(D)理由：文中指出 When the elephants detected the smell of clothing worn by a Maasai man(牠們的敵人), they moved away from the smell faster and took longer to relax.

- ( )47. What is the main idea of this passage?
- (A) Elephants use sight and smell to detect danger.
  - (B) Elephants attack people who wear red clothing.
  - (C) Scientists are now able to control elephants' emotions.
  - (D) Some Kenyan tribes understand elephants' emotions very well.

選(A)理由：文中指出大象會用視覺和嗅覺去偵查敵人,並做出回應.

- ( )48. What can be inferred about the elephant's behavior from this passage?
- (A) Elephants learn from their experiences.
  - (B) Elephants have sharper sense of smell than sight.
  - (C) Elephants are more intelligent than other animals.
  - (D) Elephants tend to attack rather than escape when in danger.

選(A)理由：文中指出馬賽族男人會用矛刺殺動物,大象聞到馬賽人穿過衣服的氣味時,

會立刻遠離,見到馬賽人紅色衣著就會憤怒。

#### 49-52 為題組

It was something she had dreamed of since she was five. Finally, after years of training and intensive workouts, Deborah Duffey was going to compete in her first high school basketball game. The goals of becoming an outstanding player and playing college ball were never far from Deborah's mind.

The game was against Mills High School. With 1:42 minutes left in the game, Deborah's team led by one point. A player of Mills had possession of the ball, and Deborah ran to guard against her. As Deborah shuffled sideways to block the player, her knee went out and she collapsed on the court in burning pain. Just like that, Deborah's season was over.

After suffering the bad injury, Deborah found that, for the first time in her life, she was in a situation beyond her control. Game after game, she could do nothing but sit on the sidelines watching others play the game that she loved so much.

Injuries limited Deborah's time on the court as she hurt her knees three more times in the next five years. She had to spend countless hours in a physical therapy clinic to receive treatment. Her frequent visits there gave her a passion and respect for the profession. And Deborah began to see a new light in her life.

Currently a senior in college, Deborah focuses on pursuing a degree in physical therapy. After she graduates, Deborah plans to use her knowledge to educate people how to best take care of their bodies and cope with the feelings of hopelessness that she remembers so well.

#### 語譯及解釋

從5歲起這是她一直夢想的事,經過數年密集訓練,Deborah Duffey終於要參加她的第一場高中籃賽,Deborah 她不曾忘情於成為傑出的球員,並在大學裡打球的目標。

這場比賽對抗米爾斯中學,比賽還剩1分42秒時,黛博拉的球隊以1分領先,米爾斯中學的球員控球,黛博拉跑去防守她,當黛博拉側身滑去阻擋那位球員時,她的膝蓋脫臼而倒在球場上讓她相當痛苦,就這樣,黛博拉的球季結束了。

遭受重創後,黛博拉發現自己生平首次處於一個她無法掌控的處境中,一場又一場

比賽他只能坐在場邊看他人打著她所深愛的球賽。

接下來的 5 年,由於黛博拉的膝蓋受傷 3 次,創傷限制了她在球場時間,她必須花費無數的時間在物理治療診所接受治療,她經常造訪診所,使她對物理治療這項職業產生熱情和尊重,黛博拉開始見到生命中的新希望。

目前身為大四學生,黛博拉專心求取物理治療的學位,畢業後,黛博拉計劃要運用她的知識教育大家如何好好照顧自己的身體,並處理她最熟悉的失望心情。

intensive 密集的 ; workout 鍛鍊 ; compete 競賽

possession 控球 ; shuffle 拖著(腳)走,狡猾地混入

sideways 側身 ; block 阻擋 ; collapse 倒下,崩塌

burning 強烈的 ; sideline(球場)邊線 ; (basket) court 球場

countless 無數的 ; physical 物理的,身體的 ; therapy 治療

clinic 診所 ; treatment 治療

( ) 49. What is the best title for this passage?

- (A) A Painful Mistake
- (B) A Great Adventure
- (C) A Lifelong Punishment
- (D) A New Direction in Life

選(D)理由：文中敘述一位受過傷的籃球員在復健中找到人生新的方向。

( ) 50. How did Deborah feel when she first hurt her knee?

- (A) Excited.
- (B) Confused.
- (C) Ashamed.
- (D) Disappointed.

選(D)理由：文中敘述 Deborah 熱愛參賽卻因傷重而只能在球場邊觀戰。

- ( ) 51. What is true about Deborah Duffey?
- (A) She didn't play on the court after the initial injury.
  - (B) She injured her knee when she was trying to block her opponent.
  - (C) She knew that she couldn't be a basketball player when she was a child.
  - (D) She refused to seek professional assistance to help her recover from her injuries.

選(B)理由：文中敘述比賽還剩 1 分 42 秒時,在米爾斯中學的球員控球下,黛博拉跑去防守,當黛博拉側身滑去阻擋那位球員時,她的膝蓋脫臼而倒在球場上讓她相當痛苦。

- ( ) 52. What was the new light that Deborah saw in her life?
- (A) To help people take care of their bodies.
  - (B) To become a teacher of Physical Education.
  - (C) To become an outstanding basketball player.
  - (D) To receive treatment in a physical therapy office.

選(A)理由：文中敘述黛博拉計劃要在畢業後運用她的知識教育大家如何照顧自己的身體,並處理她最熟悉的失望心情。

### 53-56 為題組

Redwood trees are the tallest plants on the earth, reaching heights of up to 100 meters. They are also known for their longevity, typically 500 to 1000 years, but sometimes more than 2000 years. A hundred million years ago, in the age of dinosaurs, redwoods were common in the forests of a much more moist and tropical North America. As the climate became drier and colder, they retreated to a narrow strip along the Pacific coast of Northern California.

The trunk of redwood trees is very stout and usually forms a single straight column. It is covered with a beautiful soft, spongy bark. This bark can be pretty thick, well over two feet in the more mature trees. It gives the older trees a certain kind of protection from insects, but the main benefit is that it keeps the center of the tree intact from moderate forest fires because of its thickness. This fire resistant quality explains why the giant redwood grows to live that long. While most other types of trees are destroyed by forest



fires, the giant redwood actually prospers because of them. Moderate fires will clear the ground of competing plant life, and the rising heat dries and opens the ripe cones of the redwood, releasing many thousands of seeds onto the ground below.

New trees are often produced from sprouts, little baby trees, which form at the base of the trunk. These sprouts grow slowly, nourished by the root system of the “mother” tree. When the main tree dies, the sprouts are then free to grow as full trees, forming a “**fairy ring**” of trees around the initial tree. These trees, in turn, may give rise to more sprouts, and the cycle continues.

#### 語譯及解釋

紅杉樹是地球上最高的植物,高度可達 100 公尺,它們同時也以長壽著名,通常樹齡 500 到 1000 年,但有時超過 2000 年,一億年前的恐龍時代,紅杉常見於更為潮濕和熱帶的北美森林中,隨著氣候日趨乾燥寒冷,它們就撤退到北加州太平洋海岸邊緣一條狹長帶中。

紅杉樹的樹幹很粗壯,通常會形成單一直樹幹,樹幹上覆著既美麗,柔軟,像海綿的樹皮,這種樹皮會很厚,在更成熟的樹木上可以遠超過 2 尺厚,它可以保護老樹木不受蟲害,但最大的好處是其厚度可使樹心不受普通森林火災傷害,此耐火特質解釋了巨型紅杉可以活那麼久的原因,當多數其他樹種遭到森林大火摧毀,巨型紅杉實際上卻因大火而更茂盛,普通火災會清理競爭植物的地盤,而上升的熱氣會使成熟的紅杉果乾燥裂解,釋放數以千計的種子到地面。

新樹往往從樹芽,即小樹所長成的,它們會在樹幹底部形成,這些樹芽生長緩慢,由『母樹』的根系所培養,主樹死亡時,樹芽就會自由地長成完整的樹木,在原來樹木周圍形成『仙女環』一般的樹木,這些樹會依次產生更多的樹芽,一直不斷地循環下去。

redwood 紅杉 ; longevity 長壽 ; dinosaur 恐龍

moist 濕潤的 ; tropical 熱帶的 ; retreat 撤退

trunk 樹幹 ; stout 堅固的 ; straight 直的

column 柱 ; spongy 海綿似的 ; bark 樹皮

intact 完好無缺的 ; prosper 繁榮;茂盛 ; cone 球果;圓錐體

fairy ring 蘑菇圈,仙女環 ; initial 最初的;起始的 ; in turn 依次

- ( ) 53. Why were redwood trees more prominent in the forests of North America millions of years ago?
- (A) The trees were taller and stronger.  
(B) The soil was softer for seeds to sprout.  
(C) The climate was warmer and more humid.  
(D) The temperature was lower along the Pacific coast.

選(C)理由：文中敘述該樹種在更為潮濕和熱帶的北美森林中到處可見。 prominent = outstanding; distinguished 顯著的

- ( ) 54. What does a “fairy ring” in the last paragraph refer to?
- (A) Circled tree trunks.  
(B) Connected root systems.  
(C) Insect holes around an old tree.  
(D) Young trees surrounding a mature tree.

選(D)理由：文中敘述老樹死亡時,樹芽就會自由地在老樹周圍生長成完整的樹木,形成「蘑菇圈」般的樹林。

- ( ) 55. Which of the following is a function of the tree bark as mentioned in the passage?
- (A) It allows redwood trees to bear seeds.  
(B) It prevents redwood trees from attack by insects.  
(C) It helps redwood trees absorb moisture in the air.  
(D) It makes redwood trees more beautiful and appealing.

選(B)理由：文中敘述該樹皮可保護老樹不受蟲害,使樹中心不受普通森林火災的摧

殘。

- ( ) 56. Why do redwood trees grow to live that long according to the passage?
- (A) They have heavy and straight tree trunks.  
(B) They are properly watered and nourished.  
(C) They are more resistant to fire damage than other trees.  
(D) They produce many young trees to sustain their life cycle.

選(C)理由：文中提及此樹種的耐火特性說明何以巨型紅杉可活得那麼久。

100 年學測解答

41.C	42.C	43.A	44.D	45.A	46.D	47.A	48.A	49.D	50.D
51.B	52.A	53.C	54.D	55.B	56.C				

100 年指考

第 36 至 39 題為題組

Since the times of the Greeks and Romans, truffles have been used in Europe as delicacies and even as medicines. They are among the most expensive of the world's natural foods, often commanding as much as US\$250 to US\$450 per pound. Truffles are actually mushrooms, but unusual ones. They live in close association with the roots of specific trees and their fruiting bodies grow underground. This is why they are difficult to find.

Truffles are harvested in Europe with the aid of female pigs or truffle dogs, which are able to detect the strong smell of mature truffles underneath the surface of the ground. Female pigs are especially sensitive to the odor of the truffles because it is similar to the smell given off by male pigs. The use of pigs is risky, though, because of their natural tendency to eat any remotely edible thing. For this reason, dogs have been trained to dig into the ground wherever they find this odor, and they willingly exchange their truffle for a piece of bread and a pat on the head. Some truffle merchants dig for their prizes themselves when they see truffle flies hovering around the base of a tree. Once a site has been discovered, truffles can be collected in subsequent years.

To enjoy the wonderful flavor of what has been described as an earthly jewel, you must eat fresh, uncooked specimens shortly after they have been harvested. The strength of their flavor decreases rapidly with time, and much of it is lost before some truffles reach the market. To preserve them, gourmet experts suggest putting them in closed glass jars in a refrigerator. Another recommendation is to store them whole in bland oil.

語譯及解釋

自從希臘及羅馬時代以來,在歐洲松露已被用來當作佳餚,甚至藥物,松露是全世界最昂貴的天然食物之一,每磅常要價高達 250 美元至 450 美元,松露其實就是蘑菇,卻不是普通的蘑菇,松露生長的地方和特殊樹種的根部有密切的關聯,其果實體也長在地下,這就是為何難以找到松露的原因。

在歐洲要採集松露須藉助於母豬或尋菇犬,牠們能偵測到地表下成熟松露的強烈氣味,母豬對松露的氣味尤其敏感,因為該氣味類似於公豬散發出來的味道,但使用豬來尋找松露很冒險,因為豬天生傾向吃些不太能吃的東西,因此,狗被訓練去發掘這種氣味,並開始往地下挖,這些狗願意用找到的松露換取一塊麵包和友善的拍頭,一些松露商看到松露蠅盤旋於樹根時,他們也會自行挖掘這些值錢貨,一旦某處被發現生長松露,後續幾年該處松露就會再被採收到。

要享受這種被人描述為人間寶石的美味,你須在它們剛被採收後找幾樣新鮮且還未烹煮的來吃,松露的味道強度隨時間逝去很快就會消散,某些松露在送到市場前大部分的味道已經失去,若要保存松露,美食專家建議將它們置於封閉的玻璃罐內並放在冰箱裡,另一建議則是將松露完全放在清淡的油裡。

truffle 松露 ; delicacy 佳餚 ; command 博得,贏得

mushroom 蘑菇 ; association (+ with) (與...有)關連

fruiting body 果實體(真菌的產孢構造) ; underground 在地面下

harvest 收割 ; with the aid (/ help) of 在...協助下



detect 偵察出 ; sensitive (+ to) (對...)敏感的 ; odor 氣味

give off (/ send out)發出,排放出 ; tendency 傾向,易於...

remotely 極少地 ; edible 可以吃的 ; remotely edible 極不可食用

exchange A for B : 以 A 去換取 B ; pat 輕輕地拍

hover 盤旋 ; subsequent 後續的 ; described as 被描述為...

shortly(/ soon) after A : 在 A 之後沒多久 ; earthly 人間的

jewel 珠寶(可數) (jewelry 珠寶,不可數) ; specimen 樣本

gourmet 美食家 ; recommendation 推薦 ; bland 清淡的

- ( ) 36. Why do some people prefer using dogs than pigs in search of truffles?  
(A) Dogs have stronger paws to dig.  
(B) Dogs usually won't eat the truffles found.  
(C) Dogs have a better sense of smell than pigs.  
(D) Dogs are less likely to get excited than pigs.

選(B)理由：文中提及狗願意用牠們的松露換得麵包及拍拍頭。 paw 爪

- ( ) 37. What is the best way to enjoy truffles as a delicacy?  
(A) Eating them cooked with pork.  
(B) Eating them uncooked with bland oil.  
(C) Eating them fresh right after being collected.  
(D) Eating them after being refrigerated.

選(C)理由：文中提及最好趁剛採摘還新鮮及還未烹飪的時候吃

- ( ) 38. Which of the following statements is true?  
(A) Truffles are roots of some old trees.  
(B) Truffles can be found only by dogs and pigs.  
(C) Truffles send out a strong odor when they mature.  
(D) Truffles cannot be collected at the same place repeatedly.

選(C)理由：文中提及母豬和狗能偵測到地表下成熟松露的強烈氣味

( ) 39. Which of the following can be inferred from the passage?

- (A) Truffles sold in glass jars are tasteless.
- (B) Truffles taste like fruit when eaten fresh.
- (C) Truffles are only used for cooking nowadays.
- (D) Truffles are expensive because they are difficult to find.

選(D)理由：文中提及一磅售價高達 250 至 450 美元,且生長在地底下很難找到。

infer 推斷 ; tasteless 無味的

#### 第 40 至 43 題為題組

In an ideal world, people would not test medicines on animals. Such experiments are stressful and sometimes painful for animals, and expensive and time-consuming for people. Yet animal experimentation is still needed to help bridge vast gaps in medical knowledge. That is why there are some 50 to 100 million animals used in research around the world each year.

Europe, on the whole, has the world's most restrictive laws on animal experiments. Even so, its scientists use some 12 million animals a year, most of them mice and rats, for medical research. Official statistics show that just 1.1 million animals are used in research in America each year. But that is misleading. The American authorities do not think mice and rats are worth counting and, as these are the most common laboratory animals, the true figure is much higher. Japan and China have even less comprehensive data than America.

Now Europe is reforming the rules governing animal experiments by restricting the number of animals used in labs. Alternatives to animal testing, such as using human tissue or computer models, are now strongly recommended. In addition, sharing all research results freely should help to reduce the number of animals for scientific use. At present, scientists often share only the results of successful experiments. If their findings do not fit the hypothesis being tested, the work never sees the light of day. This practice means wasting time, money, and animals' lives in endlessly repeating the failed experiments.

Animal experimentation has taught humanity a great deal and saved countless lives. It needs to continue, even if that means animals sometimes suffer. Europe's new measures should eventually both reduce the number of animals used in experiments and improve the way in which scientific research is conducted.

語譯及解釋

在理想世界中,人們不會在動物身上測試藥物,對動物而言,這類實驗是有壓力的,有時是痛苦的,對人而言,則是昂貴而耗時的,但動物實驗仍有必要,以助消除醫學知識的歧見,這就是為何每年世界上約有 5000 萬至 1 億隻動物用於實驗的原因。

大體而言,歐洲對動物實驗有全世界最嚴格的法律,縱然如此,歐洲的科學家每年在醫學研究上會用掉約 1200 萬隻動物,其中大部分為小型鼠和大型鼠,在美國官方統計顯示,每年只有 110 萬隻動物被用於研究中,不過這會造成誤導,美國當局認為小型鼠和大型鼠不值得統計,因為那些是最常見的實驗室動物,(故)真正的數字要高出許多,而日本和中國比起美國所擁有的全面性資料就更少得多。

目前歐洲正用限制實驗室用的動物的數量以改革動物實驗管制法規,目前有人強烈建議動物實驗的替代方案,如使用人體組織或是電腦模擬實驗,此外,免費分享所有研究成果有助於減少科學(實驗)之用的動物數量,目前,科學家通常只分享成功的實驗結果,如果他們發現結果不符合被測試的假設,那麼該研究就(掩藏)不為人所知,這種習慣意味著正浪費時間、金錢和動物生命於無止盡重複失敗的實驗上,動物實驗教導人類很多,並挽救無數生命,動物實驗需要持續,即使這意味著有時動物要受難,歐洲的新措施最終應該會減少實驗用動物的數量並改善(做)科學研究的方法。

conduct (/do / carry out / perform) experiment (n.) + on [C, U]

experiment (vi.) + on (/ with) ; stressful 壓力大的

painful 痛苦的 ; time-consuming 耗時的 ; bridge vast gaps 消除巨大的歧異

bridge 把...連結,縮短距離 ; on the whole 總體而言(= by and large; in general; overall)

restrictive 限制性的 ; statistics 統計學(U),統計數字(C)

misleading 誤導的 ; authorities 當局,(恆用複數)

The authorities did not interfere with us. ; comprehensive 全面的

Now Europe is reforming the rules governing (= which govern) animal experiments by restricting the number of animals used (= which are used) in labs. 具修飾性格的形容詞

片語和形容詞子句的轉換

alternative 選擇(= option; choice) ; human tissue 人體組織

at (the) present (time) = now ; findings 發現(恆用複數)

fit 與...相稱 ; hypothesis 假設

see the light of day 重見天日,開始為人所知

practice 慣例 ; endlessly 無窮盡 ; humanity 人類

measure 措施 ; conduct 執行 ; ensure 確保

(insure...against 投保 ; assure...of 保證)

enforce 執行,實施 (reinforce 增援,加強) ; ban 禁止(令)

publication 出版品 ; remove (+ from) 移除

( )40. What is the main idea of this passage?

- (A) The success of animal experiments should be ensured.
- (B) Ban on the use of animals in the lab should be enforced.
- (C) Greater efforts need to be taken to reduce the number of lab animals.
- (D) Scientists should be required to share their research results with each other.

選(C)理由: 文中提到希望不會在動物身上測試藥物,歐洲已開始立法,並也提到使用人體組織或電腦模擬實驗以減少耗用實驗動物

( )41. Which of the following statements is true about animals used in the lab?



- (A) America uses only about 1.1 million lab animals per year.
- (B) Europe does not use mice and rats as lab animals at all.
- (C) Britain does not use as many lab animals as China does.
- (D) Japan has limited data on the number of lab animals used each year.

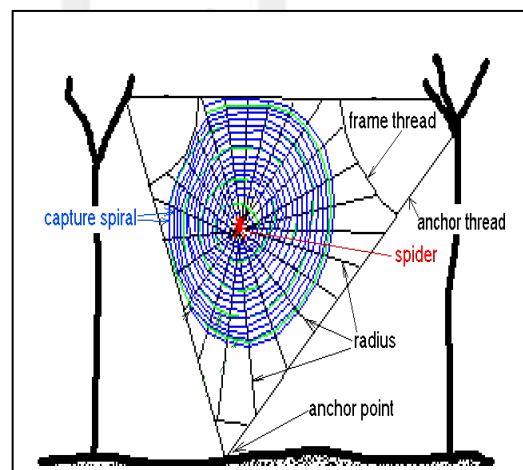
選(D)理由：文中提及日本和中國比起美國所擁有的全面性資料就更少得厲害

- ( )42. Which of the following is mentioned as an alternative to replace animal experiments?
- (A) Statistical studies.
  - (B) Computer models.
  - (C) DNA planted in animals.
  - (D) Tissue from dead animals.

選(B)理由：文中提及有人強烈建議使用人體組織或電腦模擬實驗可以減少耗用實驗動物

- ( )43. What usually happens to unsuccessful animal experiments?
- (A) They are not revealed to the public.
  - (B) They are made into teaching materials.
  - (C) They are collected for future publication.
  - (D) They are not removed from the research topic list.

選(A)理由：文中提及如果他們發現實驗結果若與被測試的假設不符,那麼該研究就(掩藏)不為人所知



#### 第 44 至 47 題為題組

Spider webs are one of the most fascinating examples of animal architecture. The most beautiful and structurally ordered are the orb webs. The main function of the web is to intercept and hold flying prey, such as flies, bees and other insects, long enough for the spider to catch them. In order to do so, the threads of the web have to withstand the impact forces from large and heavy prey as well as environmental forces from wind and rain for at least a day in most cases.

The orb web is found to have two main characteristics. The first is its geometry, which consists of an outer frame and a central part from which threads radiate outward. Enclosed in the frame are capture spirals winding round and round from the web center out to the frame. The whole web is in tension and held in place by anchor threads, which connect the frame to the surrounding vegetation or objects. The second and perhaps most important characteristic is the material with which it is built. Spider silk is a kind of natural composite that gives this lightweight fiber a tensile strength comparable to that of steel, while at the same time making it very elastic. Two types of silk threads are used in the web. One is highly elastic and can stretch to almost twice its original length before breaking and, for most types of spiders, is covered in glue. This type is used in the capture spiral for catching and holding prey. The other is stiffer and stronger, and is used for the radius, frames and anchor threads, which allows the web to withstand prey impact and to keep its structural strength through a wide range of environmental conditions.

語譯及解釋

蜘蛛網是動物建築中最令人著迷的例子之一,而最美麗且結構有序的就是軌道形蛛網,該網主要功能就是攔截並長時間留住飛行中的獵物,例如蒼蠅,蜜蜂及其他昆蟲等,以便蜘蛛去捕捉牠們,為此,蜘蛛網的線至少須一整天能承受大而重的獵物的衝擊力,及來自風雨的環境力量。

軌道形蛛網被發現有兩項主要特點,第一是其幾何形由外部框架和中央部份組成,絲線向外輻射,包容於框架者是自網心至外框一圈又一圈捕捉用的螺旋網,它緊繃著,由錨線固定,錨線則將框架連結到周圍草木或東西上,第二項特點,或許是最重要的,就是以構築網的材料,蜘蛛絲是種天然複合材料,給予這種輕量纖維可較量鋼材的伸展力,同時又富有彈性,兩種不同的絲線用於蛛網,一是高彈性,可延伸到原本長度的兩倍而不斷,對大部分種類的蜘蛛而言,此絲線會覆蓋一層膠,這類絲線用於捕捉用螺旋網以提取、滯留獵物,另一種絲線更剛強有力,用於輻射線條、框架和錨線,這可讓網能承受獵物的衝擊力,讓它在多種環境狀況下保持其結構力。

fascinating 令人著迷的 ; orb 軌道,球狀物 ; intercept 攔截

prey 獵物(U) ; thread(毛 etc)線 ; withstand 禁得起

characteristic 特色 ; geometry 幾何形 ; radiate 自中心輻射

consist of 由...所組成 (= be composed of = be made up of )

Enclosed in the frame are capture spirals winding (which wind) ...  
= Capture spirals winding (which wind) ...are enclosed in the frame.

因主詞及修飾主詞的分詞片語過長,主要動詞 are 及補語放太後面,且又短,為修辭效果,  
故將主語和補語位置互調

in tension 緊繃地 ; in place 在適當位置 ; anchor thread 定著線

anchor 錨,賴以支撐的人(或物) ; connect A to B : 將 A 連結於 B

surrounding 周圍的 ; vegetation 草木

composite 複合的 ; lightweight 輕量的 ; tensile 張力的

comparable (+ to) 可和...較量 ; elastic 彈性的

twice (/ three times...) + the length (/ height / size) of...  
→twice (/ three times...) + as long (/ tall / large) as...

stretch 拉長 ; covered in... : 為...所覆蓋

stiff 硬的; 挺的 ; radius 輻射線條 ; structural strength 結構力

a wide range (variety) of 許多不同的

( )44. What is this passage mainly about?

- (A) The food network in nature.
- (B) The construction of orb webs.
- (C) The network of geometrical studies.
- (D) The environmental challenges for spider webs.

選(B)理由：文中多描述蛛網結構

- ( )45. What does the word “so” in the first paragraph refer to?
- (A) To catch and keep small creatures.  
(B) To find a good material for the web.  
(C) To observe the behavior patterns of spiders.  
(D) To present a fantastic architecture by animals.

選(A)理由：文中 so 指蜘蛛網的主要功能---攔截、留置飛行中的獵物,如蒼蠅,蜜蜂及其他昆蟲... 。 observe 觀察 ; fantastic 難以置信,驚人的

- ( )46. Which part of the web is used for supporting the web itself?
- (A) The center of the web.  
(B) The glue on the lines.  
(C) The anchor threads.  
(D) The capture spiral.

選(C)理由：文中提及 The whole web is in tension and held in place by anchor threads...

- ( )47. According to the passage, which statement is true about the silk threads?
- (A) They are all sticky and extendable.  
(B) They are usually strong enough to last for a day.  
(C) They remove harmful chemicals from insects.  
(D) They are made of rare plants in the environment.

選(B)理由：文中提及蜘蛛網的線至少須一整天能承受大而重的獵物的衝擊力,及來自風雨的環境力量。 extendable 可延長的

## 第 48 至 51 題為題組

Doctor of Philosophy, usually abbreviated as PhD or Ph.D., is an advanced academic degree awarded by universities. The first Doctor of Philosophy degree was awarded in Paris in 1150, but the degree did not acquire its modern status until the early 19<sup>th</sup> century. The doctorate of philosophy as it exists today originated at Humboldt University. The German practice was later adopted by American and Canadian universities, eventually becoming common in large parts of the world in the 20<sup>th</sup> century.



For most of history, even a bachelor's degree at a university was the privilege of a rich few, and many academic staff did not hold doctorates. But as higher education expanded after the Second World War, the number of PhDs increased accordingly. American universities geared up first: By 1970, America was graduating half of the world's PhDs in science and technology. Since then, America's annual output of PhDs has doubled, to 64,000. Other countries are catching up. PhD production has sped up most dramatically in Mexico, Portugal, Italy, and Slovakia. Even Japan, where the number of young people is shrinking, has **churned out** about 46% more PhDs.

Researchers now warn that the supply of PhDs has far outstripped demand. America produced more than 100,000 doctoral degrees between 2005 and 2009, while there were just 16,000 new professorships. In research, the story is similar. Even graduates who find work outside universities may not fare all that well. Statistics show that five years after receiving their degrees, more than 60% of PhDs in Slovakia and more than 45% in Belgium, the Czech Republic, Germany, and Spain are still on temporary contracts. About one-third of Austria's PhD graduates take jobs unrelated to their degrees.

Today, top universities around the world are still picking bright students and grooming them as potential PhDs. After all, it isn't in their interests to turn the smart students away: The more bright students stay at universities, the better it is for academics. But considering the oversupply of PhDs, some people have already begun to wonder whether doing a PhD is a good choice for an individual.

#### 語譯及解釋

(哲學)博士學位,(philosophy 與狹義的『哲學』無關),常縮寫成 PhD 或是 Ph.D.,是由大學授予的高等學術學位,第一個博士學位於西元 1150 年在巴黎授予,但此學位直到 19 世紀初才擁有目前的地位,今天的博士學位起源於洪堡大學,德國此慣例後來被美、加的大學所採納,最後普遍於 20 世紀在全球大部分地區。

歷史上大半時間,即使是大學學士學位都曾是少數富人的專利,就連許多學術人員都沒有博士學位,但二次大戰後,因高等教育的推廣,博士數量相對增加,美國的大學先提高數量:1970 年之前,世界上半數的科技博士由美國頒授畢業,此後,美國博士的年產量倍增達 6 萬 4 千名,其他國家則追趕當中,在墨西哥、葡萄牙、義大利及斯洛伐克博士的加

速生產更引人注目,甚至在年輕人數目縮減的日本,也大量生產增加約超過 46 % 的博士。

研究人員目前警告,現在博士已遠供過於求,從 2005 年到 2009 年,美國已生產逾 10 萬名博士,卻只有 1 萬 6 千名新教授缺額,在研究學術界,情況也類似,即使畢業生在校外找工作,也不見得過得好,統計顯示,在獲得學位 5 年之後,斯洛伐克有超過 6 成的博士,比利時、捷克、德國和西班牙則有超過 45 % 的博士仍在做臨時契約工作,奧地利約有 3 分之 1 的博士畢業生從事與所學不相干的工作。

今天,全球各地的頂尖大學仍挑選優秀的學生,並培養他們成為潛在可能的博士,畢竟,拒收這些聰明的學生並不符合他們的利益:留在大學裡資優生越多,其學術人員就更優良,但顧及供過於求的博士,有些人已開始探究,當博士對個人(生涯)而言是否是個好選擇。

..., (which is) usually abbreviated as PhD or Ph.D., is ...是非限定用法的形容詞子句轉型為分詞片語的表現

advanced academic degree 高級的學位

...(which is) awarded by universities. 也是形容詞子句轉型為分詞片語

abbreviate 縮寫 ; advanced 高等,先進的 ; academic 學術的

award 頒予 (award A to B = award B + A : 將 A 頒予 B)

status 身分;地位 ; doctorate 博士學位 ; originate 起源(於)

as it exists today 為插入補語,可置句首 ; practice 習慣,慣例

adopt 採用,收養 (adapt 使...適應) ; bachelor 學士

privilege 特權 ; expand 擴大 ; accordingly(=correspondingly)因此

gear up (/ become ready) for : 為...做準備

gear ... up for = make ... ready for : 使...做準備

output 產出量 ; double 倍增 ; catch up (with) 追上

speed up 加速 ; dramatically 戲劇性地,引人注目的

shrink(使)縮小 ; churn out 大量生產,濫造

outstrip 超過,勝過 ; professorship 教授職位 ; fare 成功

statistics 統計數字(恆複數) ; on temporary contracts 依臨時契約

unrelated (+ to) 與...無關 ; groom 使做好準備,培養,訓練

potential 潛在的 ; in one's interests 符合某人的利益

oversupply 供應過多

( ) 48. In which country did the modern practice of granting doctoral degrees start?

- (A) France. (B) Germany.  
(C) Canada. (D) The U.S.

選(B)理由：文中提及現存的博士學位起源於(德國)洪堡大學

( ) 49. Which of the following words is closest in meaning to “**churned out**” in the second paragraph?

- (A) Failed. (B) Warned.  
(C) Demanded. (D) Produced.

選(D)理由：文中提到“從那時起,美國每年所生產的博士人數已倍增..., 之後又表示其他國家也大量培養出博士

- ( ) 50. Which of the following may be inferred from the third paragraph?
- (A) PhD graduates in Austria are not encouraged to work outside university.  
(B) Most German PhDs work at permanent jobs immediately after graduation.  
(C) It is much easier for American PhD holders to find a teaching position than a research job.  
(D) It is more difficult for PhDs to get a permanent job five years after graduation in Slovakia than in Spain.

選(D)理由：該段落提到在獲得學位 5 年後,斯洛伐克仍有超過 6 成的博士,比利時、捷克、德國和西班牙則有超過 45 %的博士仍在做臨時契約工作...。

permanent 恆久的

- ( ) 51. Which of the following best describes the author's attitude toward the increase of PhDs in recent years?
- (A) Concerned. (B) Supportive.  
(C) Indifferent. (D) Optimistic.

選(A)理由：文中最後一句強調有些人已開始探究,當博士對個人(生涯)而言是否是個好選擇。

attitude (+ toward) (對...)態度 ; supportive (+ of) 支持...

indifferent (+ to) 對...不關心 ; optimistic 樂觀的

### 100 指考解答

36.B	37.C	38.C	39.D	40.C	41.D	42.B	43.A	44.B	45.A
46.C	47.B	48.B	49.D	50.D	51.A				