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# IELTS Reading Recent Actual Tests



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# IELTS READING RECENT ACTUAL TESTS (2016 – 2017) WITH ANSWERS

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## Preface

As far as you know, IELTS candidates will have only 60 minutes for this IELTS Reading part with a total of 40 questions. Therefore, it is absolutely necessary that you invest time in practicing the real IELTS reading tests for this module.

Beside Cambridge IELTS Practice Tests series published by Oxford University Press, IELTS Reading Recent Actual Tests with Answers aims to develop both test-taking skills and language proficiency to help you achieve a high IELTS Reading score. It contains ten IELTS Reading Tests which were in the real IELTS tests from 2016 to early 2017 and an Answer Key. Each test contains three reading passages which cover a rich variety of topics and give a lots of practice for a wide range of question types used in the IELTS Exam such as multiple choice questions, short-answer questions, sentence completion, summary completion, classification, matching lists / phrases, matching paragraph headings, identification of information – True/False/Not Given, etc. When studying IELTS with this ebook, you can evaluate at the nearest possibility how difficult the IELTS Reading section is in the real exam, and what the top most common traps are. Moreover, these tests are extracted from authentic IELTS bank source; therefore, you are in all probability to take these tests in your real examinations.

The authors are convinced that you will find IELTS Reading Recent Actual Tests extremely helpful on your path to success with the International English Language Testing System.

**Don't just trust to luck in your IELTS exam – the key is practice!**

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# Reading Test 1

## SECTION 1

You should spend about 20 minutes on Questions 1-13, which are based on Shading Passage 1 below.

### Ants Could Teach Ants

**A** The ants are tiny and usually nest between rocks in the south coast of England. Transformed into research subjects at the University of Bristol, they raced along a tabletop foraging for food - and then, remarkably, returned to guide others. Time and again, followers trailed behind leaders, darting this way and that along the route, presumably to memorise landmarks. Once a follower got its bearings, it tapped the leader with its antennae, prompting the lesson to literally proceed to the next step. The ants were only looking for food, but the researchers said the careful way the leaders led followers, thereby turning them into leaders in their own right, marked the *Temnothorax albipennis* ant as the very first example of a non-human animal exhibiting teaching behaviour.

**B** "Tandem running is an example of teaching, to our knowledge the first in a non-human animal, that involves bidirectional feedback between teacher and pupil" remarks Nigel Franks, professor of animal behaviour and ecology, whose paper on the ant educators was published last week in the journal *Nature*.

**C** No sooner was the paper published, of course, than another educator questioned it. Marc Hauser, a psychologist and biologist and one of the scientists who came up with the definition of teaching, said it was unclear whether the ants had learned a new skill or merely acquired new information.

**D** Later, Franks took a further study and found that there were even races between leaders. With the guidance of leaders, ants could find food faster. But the help comes at

a cost for the leader, who normally would have reached the food about four times faster if not hampered by a follower. This means the hypothesis that the leaders deliberately slowed down in order to pass the skills on to the followers seems potentially valid. His ideas were advocated by the students who carried out the video project with him.

**E** Opposing views still arose, however. Hauser noted that mere communication of information is commonplace in the animal world. Consider a species, for example, that uses alarm calls to warn fellow members about the presence of a predator. Sounding the alarm can be costly, because the animal may draw the attention of the predator to itself. But it allows others to flee to safety. “Would you call this teaching?” wrote Hauser. “The caller incurs a cost. The naive animals gain a benefit and new knowledge that better enables them to learn about the predator’s location than if the caller had not called. This happens throughout the animal kingdom, but we don’t call it teaching, even though it is clearly transfer of information.”

**F** Tim Caro, a zoologist, presented two cases of animal communication. He found that cheetah mothers that take their cubs along on hunts gradually allow their cubs to do more of the hunting — going, for example, from killing a gazelle and allowing young cubs to eat merely tripping the gazelle and letting the cubs finish it off. At one level, such behaviour might be called teaching — except the mother was not really teaching the cubs to hunt but merely facilitating various stages of learning. In another instance, birds watching other birds using a stick to locate food such as insects and so on, are observed to do the same thing themselves while finding food later.

**G** Psychologists study animal behaviour in part to understand the evolutionary roots of human behaviour, Hauser said. The challenge in understanding whether other animals truly teach one another, he added, is that human teaching involves a “theory of mind” — teachers are aware that students don’t know something. He questioned whether Franks’ leader ants really knew that the follower ants were ignorant. Could they simply have been following an instinctive rule to proceed when the followers tapped them on the legs or abdomen? And did leaders that led the way to food — only to find that it had been removed by the experimenter — incur the wrath of followers? That, Hauser said, would

suggest that the follower ant actually knew the leader was more knowledgeable and not merely following an instinctive routine itself.

**H** The controversy went on, and for a good reason. The occurrence of teaching in ants, if proven to be true, indicates that teaching can evolve in animals with tiny brains. It is probably the value of information in social animals that determines when teaching will evolve, rather than the constraints of brain size.

**I** Bennett Galef Jr., a psychologist who studies animal behaviour and social learning at McMaster University in Canada, maintained that ants were unlikely to have a "theory of mind" — meaning that leaders and followers may well have been following instinctive routines that were not based on an understanding of what was happening in another ant's brain. He warned that scientists may be barking up the wrong tree when they look not only for examples of humanlike behaviour among other animals but humanlike thinking that underlies such behaviour. Animals may behave in ways similar to humans without a similar cognitive system, he said, so the behaviour is not necessarily a good guide into how humans came to think the way they do.

### **Questions 1-5**

Look at the following statements (Questions 1-5) and the list of people in the box below. Match each statement with the correct person, A, B C or D.

Write the correct letter, A, B, C or D, in boxes 1-5 on your answer sheet

**NB** You may use any letter more than once.

1. Animals could use objects to locate food.
2. Ants show two-way, interactive teaching behaviours.
3. It is risky to say ants can teach other ants like human beings do,
4. Ant leadership makes finding food faster.

5. Communication between ants is not entirely teaching.

**List of people**

- A Nigel Granks
- B Marc Hauser
- C Tim Caro
- D Bennet Galef Jr

**Questions 6-9**

Choose FOUR letters, A-H.

Write your answers in boxes 6-9 on your answer sheet.

Which FOUR of the following behaviours of animals are mentioned in the passage?

A touch each other with antenna

B alert others when there is danger

C escape from predators

D protect the young

E hunt food for the young

F fight with each other

G use tools like twigs

H feed on a variety of foods

**Questions 10-13**

Do the following statements agree with the claims of the writer in Reading Passage 1?

In boxes 10-13 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

10. Ants, 'tandem running' involves only one-way communication.

11. Franks's theory got many supporters immediately after publicity.

12. Ants' teaching behaviour is the same as that of human.

13. Cheetah share hunting gains to younger ones

## SECTION 2

### Wealth in a cold climate

**A** Dr William Masters was reading a book about mosquitoes when inspiration struck. "There was this anecdote about the great yellow fever epidemic that hit Philadelphia in 1793," Masters recalls. "This epidemic decimated the city until the first frost came." The inclement weather froze out the insects, allowing Philadelphia to recover

**B** If weather could be the key to a city's fortunes, Masters thought, then why not to the historical fortunes of nations? And could frost lie at the heart of one of the most enduring economic mysteries of all — why are almost all the wealthy, industrialised nations to be found at latitudes above 40 degrees? After two years of research, he thinks that he has found a piece of the puzzle. Masters, an agricultural economist from Purdue University in Indiana, and Margaret McMillan at Tufts University, Boston, show that annual frosts are among the factors that distinguish rich nations from poor ones. Their study is published



this month in the Journal of Economic Growth. The pair speculates that cold snaps have two main benefits — they freeze pests that would otherwise destroy crops, and also freeze organisms, such as mosquitoes, that carry disease. The result is agricultural abundance a big workforce

**C** The academics took two sets of information. The first was average income for countries, the second climate data from the University of East Anglia. They found a curious tally between the sets. Countries having five or more frosty days a month are uniformly rich; those with fewer than five are impoverished. The authors speculate that the five-day figure is important; it could be the minimum time needed to kill pests in the soil. Masters says: "For example, Finland is a small country that is growing quickly, but Bolivia is a small country that isn't growing at all. Perhaps climate has something to do with that." In fact, limited frosts bring huge benefits to farmers. The chills kill insects or render them inactive; cold weather slows the break-up of plant and animal material in the soil, allowing it to become richer; and frosts ensure a build-up of moisture in the ground for spring, reducing dependence on seasonal rains. There are exceptions to the "cold equals rich" argument. There are well-heeled tropical countries such as Hong Kong and Singapore (both city-states, Masters notes), a result of their superior trading positions. Likewise, not all European countries are moneyed — in the former communist colonies, economic potential was crushed by politics.

**D** Masters stresses that climate will never be the overriding factor — the wealth of nations is too complicated to be attributable to just one factor. Climate, he feels, somehow combines with other factors — such as the presence of institutions, including governments, and access to trading routes — to determine whether a country will do well. Traditionally, Masters says, economists thought that institutions had the biggest effect on the economy, because they brought order to a country in the form of, for example, laws and property rights. With order, so the thinking went, came affluence. "But there are some problems that even countries with institutions have not been able to get around," he says. "My feeling is that, as countries get richer, they get better institutions. And the accumulation of wealth and improvement in governing institutions are both helped by a favourable environment, including climate.

**E** This does not mean, he insists, that tropical countries are beyond economic help and destined to remain penniless. Instead, richer countries should change the way in which foreign aid is given. Instead of aid being geared towards improving governance, it should be spent on technology to improve agriculture and to combat disease. Masters cites one example: "There are regions in India that have been provided with irrigation — agricultural productivity has gone up and there has been an improvement in health." Supplying vaccines against tropical diseases and developing crop varieties that can grow in the tropics would break the poverty cycle.

**F** Other minds have applied themselves to the split between poor and rich nations, citing anthropological, climatic and zoological reasons for why temperate nations are the most affluent. In 350BC, Aristotle observed that "those who live in a cold climate . . . are full of spirit". Jared Diamond, from the University of California at Los Angeles, pointed out in his book *Guns, Germs and Steel* that Eurasia is broadly aligned east-west, while Africa and the Americas are aligned north-south. So, in Europe, crops can spread quickly across latitudes because climates are similar. One of the first domesticated crops, einkorn wheat, spread quickly from the Middle East into Europe; it took twice as long for corn to spread from Mexico to what is now the eastern United States. This easy movement along similar latitudes in Eurasia would also have meant a faster dissemination of other technologies such as the wheel and writing, Diamond speculates. The region also boasted domesticated livestock, which could provide meat, wool and motive power in the fields. Blessed with such natural advantages, Eurasia was bound to take off economically.

**G** John Gallup and Jeffrey Sachs, two US economists, have also pointed out striking correlations between the geographical location of countries and their wealth. They note that tropical countries between 23.45 degrees north and south of the equator are nearly all poor. In an article for the *Harvard International Review*, they concluded that "development surely seems to favour the temperate-zone economies, especially those in the northern hemisphere, and those that have managed to avoid both socialism and the ravages of war". But Masters cautions against geographical determinism, the idea that tropical countries are beyond hope: "Human health and agriculture can be made better

through scientific and technological research," he says, "so we shouldn't be writing off these countries. Take Singapore: without air conditioning, it wouldn't be rich."

### **Questions 14-20**

The reading passage has seven paragraphs, A-G

Choose the correct heading for paragraphs A-G from the list below.

Write the correct number, i-x, in boxes 14-20 on your answer sheet.

### **List of Headings**

- i. The positive correlation between climate and wealth
- ii. Other factors besides climate that influence wealth
- iii. Inspiration from reading a book
- iv. Other researchers' results do not rule out exceptional cases
- v. different attributes between Eurasia and Africa
- vi. Low temperature benefits people and crops
- vii. The importance of institutions in traditional views.
- viii. The spread of crops in Europe, Asia and other places
- ix. The best way to use aid
- x. confusions and exceptional

14. Paragraph A

15. Paragraph B

16. Paragraph C

17. Paragraph D

18. Paragraph E

19. Paragraph F

20. Paragraph G

### **Questions 21-26**

Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 21-26 on your answer sheet.

Dr William Master read a book saying that a(an) 21 ..... which struck an American city of years ago was terminated by a cold frost. And academics found that there is a connection between climate and country's weathy as in the rich but small country of 22.....; Yet besides excellent surroundings and climate, one country still need to improve both their 23..... to achieve long prosperity,

Thanks to resembling weather condition across latitude in the continent of 24..... 'crops such as 25 ..... is bound to spread faster than from South America to the North. Other researchers also noted that even though geographical factors are important, tropical country such as 26..... still became rich due to scientific advancement.

### **SECTION 3**

You should spend about 20 minutes on Questions 1-14 which are based on Reading Passage below.

#### **Compliance or Noncompliance for children**

**A** Many Scientists believe that socialization takes a long process, while compliance is the outset of it. Accordingly, compliance for education of children is the priority. Motivationally distinct forms of child compliance, mutually positive affect, and maternal control, observed in 3 control contexts in 103 dyads of mothers and their 26-41-month-old children, were examined as correlates of internalization, assessed using observations of children while alone with prohibited temptations and maternal ratings. One form of compliance (committed compliance), when the child appeared committed wholeheartedly to the maternal agenda and eager to endorse and accept it, was emphasized. Mother-child mutually positive affect was both a predictor and a concomitant of committed compliance. Children who shared positive affect with their mothers showed a high level of committed compliance and were also more internalized. Differences and similarities between children's compliance to requests and prohibitions ("Do " vs. "Don't" demand contexts) were also explored. Maternal "Dos" appeared more challenging to toddlers than the "Don'ts." Some individual coherence of behavior was also found across both demand contexts. The implications of committed compliance for emerging internalized regulators of conduct are discussed.

**B** A number of parents were not easy to be aware of the compliance, some even overlooked their children's noncompliance. Despite good education, these children did not follow the words from their parents on several occasion 'especially boys in certain ages. Fortunately, this rate was acceptable; some parents could be patient with the noncompliance. .Someone held that noncompliance is probably not a wrong thing. In order to determine the effects of different parental disciplinary techniques on young children's compliance and noncompliance, mothers were trained to observe emotional incidents involving their own toddler-aged children. Reports of disciplinary encounters were analyzed in terms of the types of discipline used (reasoning, verbal prohibition, physical coercion, love withdrawal, and combinations thereof) and children's responses to that discipline (compliance/ noncompliance and avoidance). The relation between compliance/ noncompliance and type of misdeed (harm to persons, harm to property, and lapses of self-control) was also analyzed. Results indicated that love withdrawal combined with other techniques was most effective in securing children's compliance and

that its effectiveness was not a function of the type of technique with which it was combined. Avoidant responses and affective reunification with the parent were more likely to follow love withdrawal than any other technique. Physical coercion was somewhat less effective than love withdrawal, while reasoning and verbal prohibition were not at all effective except when both were combined with physical coercion.

**C** Noncompliant Children sometimes prefer to say no directly as they were younger, they are easy to deal with the relationship with contemporaries. when they are growing up .During the period that children is getting elder, who may learn to use more advanced approaches for their noncompliance. They are more skillful to negotiate or give reasons for refusal rather than show their opposite idea to parents directly/" Said Henry Porter, scholar working in Psychology Institute of UK. He indicated that noncompliance means growth in some way, may have benefit for children. Many Experts held different viewpoints in recent years, they tried drilling compliance into children. His collaborator Wallace Freisen believed that Organizing child's daily activities so that they occur in the same order each day as much as possible. This first strategy for defiant children is ultimately the most important. Developing a routine helps a child to know what to expect and increases the chances that he or she will comply with things such as chores, homework, and hygiene requests. When undesirable activities occur in the same order at optimal times during the day, they become habits that are not questioned, but done without thought.

Chances are that you have developed some type of routine for yourself in terms of showering, cleaning your house, or doing other types of work. You have an idea in your mind when you will do these things on a regular basis and this helps you to know what to expect. In fact, you have probably already been using most of these compliance strategies for yourself without realizing it. For children, without setting these expectations on a daily basis by making them part of a regular routine, they can become very upset. Just like adults, children think about what they plan to do that day and expect to be able to do what they want. So, when you come along and ask them to do something they weren't already planning to do that day, this can result in automatic refusals and other undesirable defiant behavior. However, by using this compliance strategy with defiant

children, these activities are done almost every day in the same general order and the child expects to already do them.

**D** Doctor Steven Walson addressed that organizing fun activities to occur after frequently refused activities. This strategy also works as a positive reinforcer when the child complies with your requests. By arranging your day so that things often refused occur right before highly preferred activities, you are able to eliminate defiant behavior and motivate your child's behavior of doing the undesirable activity. This is not to be presented in a way that the preferred activity is only allowed if a defiant child does the non-preferred activity. However, you can word your request in a way so that your child assumes that you have to do the non-preferred activity before moving on to the next preferred activity. For example, you do not want to say something such as, "If you clean your room we can play a game." Instead word your request like this, "As soon as you are done cleaning your room we will be able to play that really fun game you wanted to play."

**E** Psychologist Paul Edith insisted praise is the best way to make children to comply with. This is probably a common term you are used to hearing by now. If you praise your child's behavior, he or she will be more likely to do that behavior. So, it is essential to use praise when working with defiant children. It also provides your child with positive attention. However, it is important to know how to praise children in a way that encourages future automatic reinforcement for your child when doing a similar behavior.

### **Questions 27-31**

Choose the correct letter, A, B, C or D.

Write the correct letter in boxes 27-31 on your answer sheet,

27. The children, especially boys received good education may

A always comply with their parents, words

B be good at math

C have a high score at school

D disobey their parents' order sometimes

28. to their children's compliance and noncompliance, parents

A must be aware of the compliance

B ask for help from their teachers

C some of them may ignore their noncompliance

D pretend not to see

29. According to Henry Porter noncompliance for children

A are entirely harmful

B may have positive effects

C needs medicine assistance

D should be treated by expert doctor

30. When children are growing up, they

A always try to directly say no

B are more skillful to negotiate

C learn to cheat instead of noncompliance

D tend to keep silent

31. Which is the possible reaction the passage mentioned for elder children and younger ones if they don't want to comply with the order



A elder children prefer to refuse directly

B elder ones refuse to answer

C younger children may reject directly

D younger ones may save any words

### Questions 32-35

Look at the following people and list of statements below.

Match each person with the correct statement.

Write the correct letter A-G in boxes 32-35 on your answer sheet.

32 Henry Porter

33 Wallace Freisen

34 Steven Walson

35 Paul Edith

List of statements
A children of all ages will indirectly show noncompliance
B elder children tend to negotiate rather than show noncompliance
C converse behavior means noncompliance
D organizing fun activities to occur after frequently refused activities
E organizing child's daily activities in the same order as much as possible.

F use praise in order to make children compliant

G take the children to school at a early age

### Questions 36-40

Do the following statements agree with the claims of the writer in Reading Passage? In boxes 36-40 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

36. Socialization takes a long process, while compliance is the beginning of it.

37. Many parents were difficult to be aware of the compliance or noncompliance.

38. Noncompliant Children are simple to deal with the relationship with the people in the same age when they are growing up.

39. Experts never tried drilling compliance into children.

40. Psychologist Paul Edith negated the importance that knowing how to praise children in an encouraged way.

# Reading Test 2

## SECTION 1

### Plant Scents

**A** Everyone is familiar with scented flowers, and many people have heard that floral odors help the plant attract pollinators. This common notion is mostly correct, but it is surprising how little scientific proof of it exists. Of course, not all flowers are pollinated by biological agents—for example, many grasses are wind-pollinated—but the flowers of the grasses may still emit volatiles. In fact, plants emit organic molecules all the time, although they may not be obvious to the human nose. As for flower scents that we can detect with our noses, bouquets that attract moths and butterflies generally smell “sweet,” and those that attract certain flies seem “rotten” to us.

**B** The release of volatiles from vegetative parts of the plant is familiar, although until recently the physiological functions of these chemicals were less clear and had received much less attention from scientists. When the trunk of a pine tree is injured—for example, when a beetle tries to burrow into it—it exudes a very smelly resin. This resin consists mostly of terpenes—hydrocarbons with a backbone of 10, 15 or 20 carbons that may also contain atoms of oxygen. The heavier C<sub>20</sub> terpenes, called diterpenes, are glue-like and can cover and immobilize insects as they plug the hole. This defense mechanism is as ancient as it is effective: Many samples of fossilized resin, or amber, contain the remains of insects trapped inside. Many other plants emit volatiles when injured, and in some cases the emitted signal helps defend the plant. For example, (Z)-3-hexenyl acetate, which is known as a “green leaf volatile” because it is emitted by many plants upon injury, deters females of the moth *Heliothis virescens* from laying eggs on injured tobacco plants. Interestingly, the profile of emitted tobacco volatiles is different at night than during the day, and it is the nocturnal blend, rich in several (Z)-3-hexenyl-olesters, that is most effective in repelling the night-active *H. virescens* moths.

**C** Herbivore induced volatiles often serve as indirect defenses. These bulwarks exist in a variety of plant species, including corn, beans, and the model plant species *Arabidopsis thaliana*. Plants not only emit volatiles acutely, at the site where caterpillars, mites, aphids or similar insects are eating them, but also generally from non-damaged parts of the plant. These signals attract a variety of predatory insects that prey on the plant-eaters. For example, some parasitic wasps can detect the volatile signature of a damaged plant and will lay their eggs inside the offending caterpillar; eventually the wasp eggs hatch, and the emerging larvae feed on the caterpillar from the inside out. The growth of infected caterpillars is retarded considerably, to the benefit of the plant. Similarly, volatiles released by plants in response to herbivore egg laying can attract parasites of the eggs, thereby preventing them from hatching and avoiding the onslaught of hungry herbivores that would have emerged. Plant volatiles can also be used as a kind of currency in some very indirect defensive schemes. In the rainforest understory tree *Leonardoxa africana*, ants of the species *Petalomyrmex phylax* patrol young leaves and attack any herbivorous insects that they encounter. The young leaves emit high levels of the volatile compound methyl salicylate, a compound that the ants use either as a pheromone or as an antiseptic in their nests. It appears that methyl salicylate is both an attractant and a reward offered by the tree to get the ants to perform this valuable deterrent role.

**D** Floral scent has a strong impact on the economic success of many agricultural crops that rely on insect pollinators, including fruit trees such as the bee-pollinated cherry, apple, apricot and peach, as well as vegetables and tropical plants such as papaya. Pollination not only affects crop yield, but also the quality and efficiency of crop production. Many crops require most, if not all, ovules to be fertilized for optimum fruit size and shape. A decrease in fragrance emission reduces the ability of flowers to attract pollinators and results in considerable losses for growers, particularly for introduced species that had a specialized pollinator in their place of origin. This problem has been exacerbated by recent disease epidemics that have killed many honeybees, the major insect pollinators in the United States.

**E** One means by which plant breeders circumvent the pollination problem is by breeding self-compatible, or apomictic, varieties that do not require fertilization. Although this

solution is adequate, its drawbacks include near genetic uniformity and consequent susceptibility to pathogens. Some growers have attempted to enhance honeybee foraging by spraying scent compounds on orchard trees, but this approach was costly, had to be repeated, had potentially toxic effects on the soil or local biota, and, in the end, proved to be inefficient. The poor effectiveness of this strategy probably reflects inherent limitations of the artificial, topically applied compounds, which clearly fail to convey the appropriate message to the bees. For example, general spraying of the volatile mixture cannot tell the insects where exactly the blossoms are. Clearly, a more refined strategy is needed. The ability to enhance existing floral scent, create scent de novo or change the characteristics of the scent, which could all be accomplished by genetic engineering, would allow us to manipulate the types of insect pollinators and the frequency of their visits. Moreover, the metabolic engineering of fragrance could increase crop protection against pathogens and pests.

**F** Genetic manipulation of scent will also benefit the floriculture industry. Ornamentals, including cut flowers, foliage and potted plants, play an important aesthetic role in human life. Unfortunately, traditional breeding has often produced cultivars with improved vase life, shipping characteristics, color and shape while sacrificing desirable perfumes. The loss of scent among ornamentals, which have a worldwide value of more than \$30 billion, makes them important targets for the genetic manipulation of flower fragrance. Some work has already begun in this area, as several groups have created petunia and carnation plants that express the linalool synthase gene from *C. Breweri*. These experiments are still preliminary: For technical reasons, the gene was expressed everywhere in the plant, and although the transgenic plants did create small amounts of linalool, the level was below the threshold of detection for the human nose. Similar experiments in tobacco used genes for other monoterpene synthases, such as the one that produces limonene, but gave similar results.

**G** The next generation of experiments, already in progress, includes sophisticated schemes that target the expression of scent genes specifically to flowers or other organs—such as special glands that can store antimicrobial or herbivore-repellent compounds.

### Questions 1-4

The reading Passage has seven paragraphs A-G.

Which paragraph contains the following information?

Write the correct letter A-G, in boxes 1-4 on your answer sheet.

1. Substance released to help plants themselves.
2. Scent helps plant's pollination.
3. Practice on genetic experiment of fragrance.
4. Plant's scent attracts herbivore's enemy for protection.

### Questions 5-8

Do the following statements agree with the information given in Reading Passage 1? In boxes 5-8 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

5. We have few evidence to support the idea that scent attracts pollinators.
6. *Heliothis virescens* won't eat those tobacco leaves on which they laid eggs.
7. Certain ants are attracted by volatiles to guard plants in rainforest.
8. Pollination only affects fruit trees' production rather than other crop trees.

### Questions 9-13

Choose the correct letter, A, B, C or D.

Write your answers in boxes 9-13 on your answer sheet.

9. How do wasps protect plants when they are attracted by scents according to the passage?

- A plants induce wasps to prey herbivore.
- B wasps lay eggs into caterpillars.
- C wasps laid eggs on plants to expel herbivore.
- D offending caterpillars and wasp eggs coexist well.

10. What reason caused number of honeybees decline in the United States.

- A pollination process
- B spread illness
- C crop trees are poisonous
- D grower's overlook

11. Which of the following drawbacks about artificial fragrance is NOT mentioned in the passage?

- A it's very expensive
- B it can't tell correct information to pollinators.
- C it needs massive manual labour
- D it poisons local environment

12. The number of \$30 billion quoted in the passage is to illustrate the fact that:

A favorable perfumes are made from ornamental flowers

B traditional floriculture industry needs reform.

C genetic operation on scent can make vast profit.

D Scent plays a significant role in Ornamental industry.

13. What is weakness of genetic experiments on fragrance?

A Linalool level is too low to be smelt by nose

B no progress made in linalool emission

C experiment on tobacco has a better result

D transgenic plants produce intense scent

## **SECTION 2**

You should spend about 20 minutes on Questions 14-26, which are based on Reading Passage 2 below.

### **The Development of Plastics**

**A** When rubber was first commercially produced in Europe during the nineteenth century, it rapidly became a very important commodity, particularly in the fields of transportation and electricity. However, during the twentieth century a number of new synthetic materials, called plastics, superseded natural rubber in all but a few applications.

**B** Rubber is a polymer — a compound containing large molecules that are formed by the bonding of many smaller, simpler units, repeated over and over again. The same bonding



principle — polymerisation—underlies the creation of a huge range of plastics by the chemical industry.

**C** The first plastic was developed as a result of a competition in the USA. In the 1860s, \$10,000 was offered to anybody who could replace ivory — supplies of which were declining — with something equally good as a material for making billiard balls. The prize was won by John Wesley Hyatt with a material called celluloid. Celluloid was made by dissolving cellulose, a carbohydrate derived from plants, in a solution of camphor dissolved in ethanol. This new material rapidly found uses in the manufacture of products such as knife handles, detachable collars and cuffs, spectacle frames and photographic film. Without celluloid, the film industry could never have got off the ground at the end of the 19th century.

**D** Celluloid can be repeatedly softened and reshaped by heat, and is known as a thermoplastic. In 1907 Leo Baekeland, a Belgian chemist working in the USA, invented a different kind of plastic by causing phenol and formaldehyde to react together. Baekeland called the material Bakelite, and it was the first of the thermosets' plastics that can be cast and moulded while hot, but cannot be softened by heat and reshaped once they have set. Bakelite was a good insulator, and was resistant to water, acids and moderate heat. With these properties it was soon being used in the manufacture of switches, household items, such as knife handles, and electrical components for cars.

**E** Soon chemists began looking for other small molecules that could be strung together to make polymers. In the 1930s, British chemists discovered that the gas ethylene would polymerise under heat and pressure to form a thermoplastic they called polythene. Polypropylene followed in the 1950s. Both were used to make bottles, pipes and plastic bags. A small change in the starting material — replacing a hydrogen atom in ethylene with a chlorine atom — produced PVC (polyvinyl chloride) , a hard, fireproof plastic suitable for drains and gutters. And by adding certain chemicals, a soft form of PVC could be produced, suitable as a substitute for rubber in items such as waterproof clothing. A closely related plastic was Teflon, or PTFE (polytetrafluoroethylene). This had a very low coefficient of friction, making it ideal for bearings, rollers, and non-stick frying pans.

Polystyrene, developed during the 1930s in Germany, was a clear, glass-like material, used in food containers, domestic appliances and toys. Expanded polystyrene — a white, rigid foam — was widely used in packaging and insulation. Polyurethanes, also developed in Germany, found uses as adhesives, coatings, and — in the form of rigid foams — as insulation materials. They are all produced from chemicals derived from crude oil, which contains exactly the same elements — carbon and hydrogen — as many plastics.

**F** The first of the man-made fibres, nylon, was also created in the 1930s. Its inventor was a chemist called Wallace Carothers, who worked for the Du Pont Company in the USA. He found that under the right conditions, two chemicals — hexamethylenediamine and adipic acid would form a polymer that could be pumped out through holes and then stretched to form long glossy threads that could be woven like silk. Its first use was to make parachutes for the US armed forces in World War II. In the post-war years nylon completely replaced silk in the manufacture of stockings. Subsequently many other synthetic fibres joined nylon, including Orion, Acrilan and Terylene. Today most garments are made of a blend of natural fibres, such as cotton and wool, and man-made fibres that make fabrics easier to look after.

**G** The great strength of plastic is its indestructibility. However, this quality is also something of a drawback: beaches all over the world, even on the remotest islands, are littered with plastic bottles that nothing can destroy. Nor is it very easy to recycle plastics , as different types of plastic are often used in the same items and call for different treatments. Plastics can be made biodegradable by incorporating into their structure a material such as starch, which is attacked by bacteria and causes the plastic to fall apart. Other materials can be incorporated that gradually decay in sunlight — although bottles made of such materials have to be stored in the dark, to ensure that they do not disintegrate before they have been used.

### Questions 14-20

Complete the table below.

Choose NO MORE THAN THREE WORDS from the passage for each answer. Write your answers in boxes 14-20 on your answer sheet.

Name of plastic	Date of invention	Original region	Property	Common use
Celluloid	1860s	US		Clothing and 14 _____
15 _____	1907	US	can be cast and moulded but cannot be softened by heat	16 _____ 'household items and car parts
Polythene	1930s	17 _____		bottles
Rigid PVC			18 _____	drains and gutters
Polystyrene	1930s	Germany	transparent and resembled to 19 _____	Food container domestic
Polyurethanes		Germany	formation like 20 _____	adhesives, coatings and insulation

### Questions 21-26

Do the following statements agree with the information given in Reading Passage 2? In boxes 21-26 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

- 21. The chemical structure of plastic is very different from that of rubber.
- 22. John Wesley was a famous chemist.
- 23. Celluloid and Bakelite react to heat in the same way.
- 24. The mix of different varieties of plastic can make them less recyclable.
- 25. Adding starch into plastic does not necessarily make plastic more durable.
- 26. Some plastic containers have to be preserved in special conditions.

### SECTION 3

*You should spend about 20 minutes on Questions 27-40, which are based on Reading Passage 3 below.*

#### ***Global Warming in New Zealand***

**A** For many environmentalists, the world seems to be getting warmer. As the nearest country of South Polar Region, New Zealand has maintained an upward trend in its average temperature in the past few years. However, the temperature in New Zealand will go up 4°C in the next century while the polar region will go up more than 6°C .The different pictures of temperature stem from its surrounding ocean which acts like the air conditioner. Thus New Zealand is comparatively fortunate.

**B** Scientifically speaking, this temperature phenomenon in New Zealand originated from what researchers call " SAM (Southern Annular Mode), which refers to the wind belt that circles the Southern Oceans including New Zealand and Antarctica. Yet recent work has revealed that changes in SAM in New Zealand have resulted in a weakening of moisture during the summer, and more rainfall in other seasons. A bigger problem may turn out to be heavier droughts for agricultural activities because of more water loss from soil, resulting in poorer harvest before winter when the rainfall arrive too late to rescue.

**C** Among all the calamities posed by drought, moisture deficit ranks the first. Moisture deficit is the gap between the water plants need during the growing season and the water the earth can offer. Measures of moisture deficit were at their highest since the 1970s in New Zealand. Meanwhile, ecological analyses clearly show moisture deficit is imposed at different growth stage of crops. If moisture deficit occurs around a crucial growth stage, it will cause about 22% reduction in grain yield as opposed to moisture deficit at vegetative phase.

**D** Global warming is not only affecting agriculture production. When scientists say the country's snow pack and glaciers are melting at an alarming rate due to global warming, the climate is putting another strain on the local places. For example, when the development of global warming is accompanied by the falling snow line, the local skiing industry comes into a crisis. The snow line may move up as the temperature goes up, and then the snow at the bottom will melt earlier. Fortunately, it is going to be favourable for the local skiing industry to tide over tough periods since the quantities of snowfall in some areas are more likely to increase.

**E** What is the reaction of glacier region? The climate change can be reflected in the glacier region in southern New Zealand or land covered by ice and snow. The reaction of a glacier to a climatic change involves a complex chain of processes, Over time periods of years to several decades, cumulative changes in mass balance cause volume and thickness changes, which will affect the flow of ice via altered internal deformation and basal sliding. This dynamic reaction finally leads to glacier length changes, the advance or retreat of glacier tongues. Undoubtedly, glacier mass balance is a more direct signal of annual atmospheric conditions.

**F** The latest research result of National Institute of Water and Atmospheric (NIWA) Research shows that glaciers line keeps moving up because of the impacts of global warning. Further losses of ice can be reflected in Mt. Cook Region. By 1996, a 14 km long sector of the glacier had melted down forming a melt lake (Hooker Lake) with a volume. Melting of the glacier front at a rate of 40 m/yr will cause the glacier to retreat at

a rather uniform rate. Therefore, the lake will continue to grow until it reaches the glacier bed.

**G** A direct result of the melting glaciers is the change of high tides that serves the main factor for sea level rise. The trend of sea level rise will bring a threat to the groundwater system for its hyper-saline groundwater and then pose a possibility to decrease the agricultural production. Many experts believe that the best way to counter this trend is to give a longer-term view of sea level change in New Zealand. Indeed, the coastal boundaries need to be upgraded and redefined.

**H** There is no doubt that global warming has affected New Zealand in many aspects. The emphasis on the global warming should be based on the joints efforts of local people and experts who conquer the tough period. For instance, farmers are taking a long term, multi-generational approach to adjust the breeds and species according to the temperature. Agriculturists also find ways to tackle the problems that may bring to the soil. In broad terms, going forward, the systemic resilience that's been going on a long time in the ecosystem will continue.

**I** How about animals' reaction? Experts have surprisingly realised that animals have unconventional adaptation to global warming. A study has looked at sea turtles on a few northern beaches in New Zealand and it is very interesting to find that sea turtles can become male or female according to the temperature. Further researches will try to find out how rising temperatures would affect the ratio of sex reversal in their growth. Clearly, the temperature of the nest plays a vital role in the sexes of the baby turtles.

**J** Tackling the problems of global warming is never easy in New Zealand, because records show the slow process of global warming may have a different impact on various regions. For New Zealand, the emission of carbon dioxide only accounts for 0.5% of the world's total, which has met the governmental standard. However, New Zealand's effort counts only a tip of the iceberg. So far, global warming has been a world issue that still hangs in an ambiguous future.

## **Questions 27-32**

Choose the correct letter, A, B, C or D.

Write the correct letter in boxes 27-32 on your answer sheet.

27. What is the main idea of the first paragraph?

A The temperature in the polar region will increase less than that in New Zealand in the next century.

B The weather and climate of New Zealand is very important to its people because of its close location to the polar region.

C The air condition in New Zealand will maintain a high quality because of the ocean.

D The temperature of New Zealand will increase less than that of other regions in the next 100 years because it is surrounded by sea.

28. What is one effect of the wind belt that circles the Southern Oceans?

A New Zealand will have more moisture in winds in summer.

B New Zealand needs to face droughts more often in hotter months in a year.

C Soil water will increase as a result of weakening moisture in the winds.

D Agricultural production will be reduced as a result of more rainfall in other seasons.

29. What does "moisture deficit" mean to the grain and crops?

A The growing condition will be very tough for crops.

B The growing season of some plants can hardly be determined.

C There will be a huge gap between the water plants needed and the water the earth can offer.

D The soil of grain and crops in New Zealand reached its lowest production since 1970s.

30. What changes will happen to skiing industry due to the global warming phenomenon?

A The skiing station may lower the altitude of skiing.

B Part of the skiing station needs to move to the north.

C The snowfall may increase in part of the skiing station.

D The local skiing station may likely to make a profit because of the snowfall increase.

31. Cumulative changes over a long period of time in mass balance will lead to A alterations in the volume and thickness of glaciers.

B faster changes in internal deformation and basal sliding.

C bigger length of glaciers.

D retreat of glacier tongues as a result of change in annual atmospheric conditions.

32 Why does the writer mention NIWA in the sixth paragraph?

A To use a particular example to explain the effects brought by glacier melting.

B To emphasize the severance of the further loss of ice in Mt. Cook Region.

C To alarm the reader of melting speed of glaciers at a uniform rate.

D To note the lake in the region will disappear when it reach the glacier bed.

### Questions 33-35

Complete the summary below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer. Write your answers in boxes 33-35 on your answer sheet



Research data shows that sea level has a closely relation with the change of climate. The major reason for the increase in sea level is connected with 33 \_\_\_\_\_ , The increase in sea level is also said to have a threat to the underground water system, the destruction of which caused by rise of sea level will lead to a high probability of reduction in 34\_\_\_\_\_. In the long run, New Zealanders may have to improve the 35\_\_\_\_\_ if they want to diminish the effect change in sea levels.

### Questions 36-40

Do the following statements agree with the claims of the writer in Reading Passage 3?

In boxes 36-40 on your answer sheet, write

YES	if the statement agrees with the claims of the writer.
NO	if the statement contradicts the claims of the writer
NOT GIVEN	if it is impossible to say what the writer thinks about this

36. Farmers are less responsive to climate change than agriculturists.

37. Agricultural sector is too conservative and deal with climate change.

38. Turtle is vulnerable to climate change.

39. The global warming is going slowly, and it may have different effects on different areas in New Zealand

40. New Zealand must cut carbon dioxide emission if they want to solve the problem of global warming.

# Reading Test 3

## SECTION 1

### Grey Workers

**A** Given the speed at which their workers are growing greyer, employers know surprisingly little about how productive they are. The general assumption is that the old are paid more in spite of, rather than because of, their extra productivity. That might partly explain why, when employers are under pressure to cut costs, they persuade the 55-year-olds to take early retirement. Earlier this year, Sun Life of Canada, an insurance company, announced that it was offering redundancy to all its British employees aged 50 or over “to bring in new blood”.

**B** In Japan, says Mariko Fujiwara, an industrial anthropologist who runs a think-tank for Hakuhodo, Japan’s second-largest advertising agency, most companies are bringing down the retirement age from the traditional 57 to 50 or thereabouts - and in some cases, such as Nissan, to 45. More than perhaps anywhere else, pay in Japan is linked to seniority. Given that the percentage of workers who have spent more than 32 years with the same employer rose from 11% in 1980 to 42% by 1994, it is hardly surprising that seniority-based wage costs have become the most intractable item on corporate profit-and-loss accounts.

**C** In Germany, Patrick Pohl, spokesman for Hoechst, expresses a widely held view: “The company is trying to lower the average age of the workforce. Perhaps the main reason for replacing older workers is that it makes it easier to ‘defrost’ the corporate culture. Older workers are less willing to try a new way of thinking. Younger workers are cheaper and more flexible.” Some German firms are hampered from getting rid of older workers as quickly as they would like. At SGL Carbon, a graphite producer, the average age of workers has been going up not down. The reason, says the company’s Ivo Lingnau, is not that SGL values older workers more. It is collective bargaining: the union agreement puts strict limits on the proportion of workers that may retire early.

**D** Clearly, when older people do heavy physical work, their age may affect their productivity. But other skills may increase with age, including many that are crucial for good management, such as an ability to handle people diplomatically, to run a meeting or to spot a problem before it blows up. Peter Hicks, who co-ordinates OECD work on the policy implications of ageing, says that plenty of research suggests older people are paid more because they are worth more.

**E** And the virtues of the young may be exaggerated. “The few companies that have kept on older workers find they have good judgment and their productivity is good, ” says Mr Peterson. “Besides, their education standards are much better than those of today’s young high-school graduates.” Companies may say that older workers are not worth training, because they are reaching the end of their working lives: in fact, young people tend to switch jobs so frequently that they offer the worst returns on training. “The median age for employer-driven training is the late 40s and early 50s, ” says Mr Hicks. “It goes mainly to managers.”

**F** Take away those seniority-based pay scales, and older workers may become a much more attractive employment proposition. But most companies (and many workers) are uncomfortable with the idea of reducing someone’s pay in later life - although workers on piece-rates often earn less over time. So retaining the services of older workers may mean employing them in new ways.

**G** One innovation, described in Mr. Walker’s report on combating age barriers, was devised by IBM Belgium. Faced with the need to cut staff costs, and having decided to concentrate cuts on 55-60-year-olds, IBM set up a separate company called Skill Team, which re-employed any of the early retired who wanted to go on working up to the age of 60. An employee who joined Skill Team at the age of 55 on a five-year contract would work for 58% of his time, over the full period, for 88% of his last IBM salary. The company offered services to IBM, thus allowing it to retain access to some of the intellectual capital it would otherwise have lost.

**H** The best way to tempt the old to go on working may be to build on such “bridge” jobs: part-time or temporary employment that creates a more gradual transition from full-time work to retirement. Mr Quinn, who has studied the phenomenon, finds that, in the United States, nearly half of all men and women who had been in full-time jobs in middle age moved into such “bridge” jobs at the end of their working lives. In general, it is the best-paid and worst-paid who carry on working: “There are”, he says, “two very different types of bridge job-holders - those who continue working because they have to and those who continue working because they want to, even though they could afford to retire.”

**I** If the job market grows more flexible, the old may find more jobs that suit them. Often, they will be self-employed. Sometimes, they may start their own businesses: a study by David Storey of Warwick University found that, in Britain, 70% of businesses started by people over 55 survived, compared with an average of only 19%. To coax the old back into the job market, work will not only have to pay. It will need to be more fun than touring the country in an Airstream trailer, or seeing the grandchildren, or playing golf. Only then will there be many more Joe Clarks.

### Questions 1-4

Do the following statements agree with the information given in Reading Passage 3?

In boxes 1-4 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

1. Insurance company Sun Life of Canada made decision that it would hire more Canadian employees rather than British ones in order to get fresh staffs.
2. Unlike other places, employees in Japan get paid according to the years they are employed

3. Elder workers are laid off by some German companies which are refreshing corporate culture

4. According to Peter Hicks, companies pay older people more regardless of the contribution of they make.

### Questions 5-6

Choose the correct letter, A, B, C, D, E.

Write your answers in boxes 5-6 on your answer sheet.

According to the passage there are several advantages to hire elder people, please choose **TWO** from below :

A their productivity are more superior than the young.

B paid less compared with younger ones.

C run fast when there is a meeting

D have better inter-person relationship

E identify problems in an advanced time

### Questions 7-8

Choose the correct letter, A, B, C, D, E.

Write your answers in boxes 7-8 on your answer sheet.

According to Mr. Peterson, Compared with elder employees, young graduates have several weaknesses in workplace, please choose **TWO** of them below :

A they are not worth training.

B their productivity is lower than counterparts.

C they change work more often

D their academic criteria is somehow behind elders'

E they are normally high school graduates.

### **Questions 9-13**

Choose the correct letter, **A, B, C or D.**

Write your answers in boxes 9-13 on your answer sheet.

9. According to paragraph F, the firms and workers still hold the opinion that:

A Older workers are more likely to attract other staff

B people are not happy if pay gets lower in retiring age.

C Older people have more retaining motivation than young people

D young people often earn less for their piece-rates salary.

10. SkillTeam that has been founded by IBM conducted which of following movement:

A Ask all the old worker to continue their job on former working hours basis

B Carry on the action of cutting off the elder's proportion of employment

C Ask employees to work more hours in order to get extra pay

D Re-hire old employees and kept the salary a bit lower

11. which of the followings is correct according to the research of Mr Quinn:

A About 50% of all employees in America switched into 'Bridge' jobs.

- B Only the worst-paid continue to work.
- C More men than women fell into the category of 'bridge' work.
- D Some old people keep working for their motive rather than economic incentive.

12. Which of the followings is correct according to David Storey:

- A 70% business are successful if hire more older people.
- B Average success of self-employed business is getting lower.
- C Self-employed elder people are more likely to survive.
- D Older people's working hours are more flexible.

13. What is the main purpose of the author in writing this passage?

- A there must be a successful retiring program for the old
- B older people should be correctly valued in employment
- C old people should offer more helping young employees grow.
- D There are more jobs in the world that only employ older people

## SECTION 2

You should spend about 20 minutes on Questions 14-27, which are based on Reading Passage 2 below.

### The history of salt

**A** Salt is so simple and plentiful that we almost take it for granted. In chemical terms, salt is the combination "of a sodium ion with a chloride on, making it one of the most basic

molecules on earth. It is also one of the most plentiful: it has been estimated that salt deposits under the state of Kansas alone could supply the entire world's needs for the next 250,000 years.

**B** But salt is also an essential element. Without it, life itself would be impossible since the human body requires the mineral in order to function properly. The concentration of sodium ions in the blood is directly related to the regulation of safe body fluid levels. And while we are all familiar with its many uses in cooking, we may not be aware that this element is used in some 14,000 commercial applications. From manufacturing pulp and paper to setting dyes in textiles and fabric, from producing soaps and detergents to making our roads safe in winter, salt plays an essential part in our daily lives.

**C** Salt has a long and influential role in world history. From the dawn of civilization, it has been a key factor in economic, religious, social and political development. In every corner of the world, it has been the subject of superstition, folklore, and warfare, and has even been used as currency.

**D** As a precious and portable commodity, salt has long been a cornerstone of economies throughout history. In fact, researcher M.R. Bloch conjectured that civilization began along the edges of the desert because of the natural surface deposits of salt found there. Bloch also believed that the first war - likely fought near the ancient city of Essalt on the Jordan River - could have been fought over the city's precious supplies of the mineral.

**E** In 2200 BC, the Chinese emperor Hsia Yu levied one of the first known taxes. He taxed salt. In Tibet, Marco Polo noted that tiny cakes of salt were pressed with images of the Grand Khan to be used as coins and to this day among the nomads of Ethiopia's Danakil Plains it is still used as money. Greek slave traders often bartered it for slaves, giving rise to the expression that someone was "not worth his salt." Roman legionnaires were paid in salt - a *salarium*, the Latin origin of the word "salary."

**F** Merchants in 12th-century Timbuktu-the gateway to the Sahara Desert and the seat of scholars - valued this mineral as highly as books and gold. In France, Charles of Anjou levied the "gabelle, a salt tax, in 1259 to finance his conquest of the Kingdom of Naples.



Outrage over the gabelle fueled the French Revolution. Though the revolutionaries eliminated the tax shortly after Louis XVI, the Republic of France re-established the gabelle in the early 19th Century ; only in 1946 was it removed from the books.

**G** The Erie Canal, an engineering marvel that connected the Great Lakes to New York's Hudson River in 1825, was called "the ditch that salt built." Salt tax revenues paid for half the cost of construction of the canal. The British monarchy supported itself with high salt taxes, leading to a bustling black market for the white crystal. In 1785, the earl of Dundonald wrote that every year in England, 10,000 people were arrested for salt smuggling. And protesting against British rule in 1930, Mahatma Gandhi led a 200-mile march to the Arabian Ocean to collect untaxed salt for India's poor.

**H** In religion and culture, salt long held an important place with Greek worshippers consecrating it in their rituals. Further, in Buddhist tradition, salt repels evil spirits, which is why it is customary to throw it over your shoulder before entering your house after a funeral: it scares off any evil spirits that may be clinging to your back. Shinto religion also uses it to purify an area. Before sumo wrestlers enter the ring for a match - which is in reality an elaborate Shinto rite - a handful is thrown into the center to drive off malevolent spirits

**I** In the Southwest of the United States, the Pueblo worship the Salt Mother. Other native tribes had significant restrictions on who was permitted to eat salt Hopi legend holds that the angry Warrior Twins punished mankind by placing valuable salt deposits far from civilization, requiring hard work and bravery to harvest the precious mineral. Today, a gift of salt endures in India as a potent symbol of good luck and a reference to Mahatma Gandhi's liberation of India.

**J** The effects of salt deficiency are highlighted in times of war, when human bodies and national economies are strained to their limits. Thousands of Napoleon's troops died during the French retreat from Moscow due to inadequate wound healing and lowered resistance to disease - the results of salt deficiency.

### Questions 14-16

Choose THREE letters A-H.

Write your answers in boxes 14-16 on your answer sheet.

NB Your answers may be given in any order.

Which THREE statements are true of salt?

A A number of cities take their name from the word salt.

B Salt contributed to the French Revolution.

C The uses of salt are countless.

D Salt has been produced in China for less than 2000 years.

E There are many commercial applications for salt F Salt deposits in the state of Kansas are vast.

G Salt has few industrial uses nowadays.

H Slaves used salt as a currency.

### Questions 17-21

Complete the summary.

Choose NO MORE THAN TWO WORDS from the passage for each answer. Write your answers in boxes 17-21 on your answer sheet.

Salt is such an 17\_\_\_\_\_ that people would not be able to live without it. As well as its uses in cooking, this basic mineral has thousands of business 18\_\_\_\_\_ ranging from making paper to the manufacture of soap. Being a prized and 19\_\_\_\_\_ it has played a major part in the economies

of many countries. As such, salt has not only led to war, but has also been used to raise  
20\_\_\_\_\_ by governments in many parts of the world. There are also many  
instances of its place in religion and culture, being used as a means to get rid of evil  
21\_\_\_\_\_ .

### Questions 22-27

Do the following statements agree with the information in Reading Passage 2? In boxes  
22-27 on your answer sheet write

TRUE	if the statement agrees with the information
FALSE	if the statement contradicts the information
NOT GIVEN	if there is no information about the statement

22. It has been suggested that salt was responsible for the first war.
23. The first tax on salt was imposed by a Chinese emperor.
24. Salt is no longer used as a form of currency.
25. Most of the money for the construction of the Erie Canal came from salt taxes.
26. Hopi legend believes that salt deposits were placed far away from civilization to penalize mankind.
27. A lack of salt is connected with the deaths of some soldiers.

## SECTION 3

### Designed to Last

**Could better design cure our throwaway culture?**

**A** Jonathan Chapman, a senior lecture at the University of Brighton, UK, is one of a new breed of "sustainable designers". Like many of us, they are concerned about the huge waste associated with Western consumer culture and the damage this does to the environment. Some, like Chapman, aim to create objects we will want to keep rather than discard. Others are working to create more efficient or durable consumer goods, or goods designed with recycling in mind. The waste entailed in our fleeting relationships with consumer durables is colossal

**B** Domestic power tools, such as electric drills, are a typical example of such waste. However much DIY the purchaser plans to do, the truth is that these things are thrown away having been used, on average, for just ten minutes. Most will serve 'conscience time, gathering dust on a shelf in the garage; people are reluctant to admit that they have wasted their money. However, the end is inevitable thousands of years in landfill waste sites. In its design, manufacture, packaging, transportation and disposal, a power tool consumes many times its own weight in resources, all for a shorter active lifespan than that of the average small insect.

**C** To understand why we have become so wasteful, we should look to the underlying motivation (of consumers. 'People own things to give expression to who they are, and to show what group of people they feel they belong to, ' Chapman says. In a world of mass production, however, that symbolism has lost much of its potency. For most of human history, people had an intimate relationship with objects they used or treasured. Often they made the objects themselves, or family members passed them on. For more specialist objects, people relied on expert manufacturers living close by, whom they probably knew personally. Chapman points out that all these factors gave objects a history - a narrative - and an emotional connection that today's mass production cannot match. Without these personal connections, consumerist culture instead idolizes novelty .We know we can't buy happiness, but the chance to remake ourselves with glossy, box-fresh products seems irresistible. When the novelty fades we simply renew the excitement by buying more new stuff: what John Thackara of Doors of Perception, a network for sharing ideas about the future of design, calls the "schlock of the new".

**D** As a sustainable designer, Chapman's solution is what he calls "emotionally durable design". Think about your favorite old jeans. They just don't have the right feel until they have been worn and washed a hundred times, do they? It is like they are sharing your life story. You can fake that look, but it isn't the same. Chapman says the gradual unfolding of a relationship like this transforms our interactions with objects into something richer than simple utility. Swiss industrial analyst Walter Stahel, visiting professor at the University of Surrey, calls it the "teddy-bear factor". No matter how ragged and worn a favorite teddy becomes, we don't rush out and buy another one. As adults, our teddy bear connects us to our childhoods, and this protects it from obsolescence Stahel says this is what sustainable design needs to do.

**E** It is not simply about making durable items that people want to keep. Sustainable design is a matter of properly costing the whole process of production, energy use and disposal. "It is about the design of systems, the design of culture." says Tim Cooper from the Centre for Sustainable Consumption at Sheffield Hallam University in Britain. He thinks sustainable design has been "surprisingly slow to take off" but says looming environmental crises and resource depletion are pushing it to the top of the agenda.

**F** Thackara agrees. For him, the roots of impending environmental collapse can be summarized in two words: weight and speed. We are making more stuff than the planet can sustain and using vast amounts of energy moving more and more of it around ever faster. The Information Age was supposed to lighten our economies and reduce our impact on the environment, but the reverse seems to be happening. We have simply added information technology to the industrial era and hastened the developed world's metabolism, Thackara argues.

**G** Once you grasp that, the cure is hardly rocket science: minimize waste and energy use, stop moving stuff around so much and use people more. EZIO MANZINI, PROFESSOR of industrial design at Politecnico di Milano university, Italy, describes the process of moving to a post-throwaway society as like "changing the engine of an aircraft in mid-flight" Even so, he believes it can be done, and he is not alone.

**H** Manzini says a crucial step would be to redesign our globalized world into what he calls the "multi-local society". His vision is that every resource, from food to electricity generation, should as far as possible be sourced and distributed locally. These local hubs would then be connected to national and global networks to allow the most efficient use and flow of materials.

**I** So what will post-throwaway consumerism look like? For a start, we will increasingly buy sustainably designed products. This might be as simple as installing energy-saving light bulbs, more efficient washing machines, or choosing locally produced groceries with less packaging.

**J** We will spend less on material goods and more on services. Instead of buying a second car, for example, we might buy into a car-sharing network. We will also buy less and rent a whole lot more: why own things that you hardly use, especially things that are likely to be updated all the time? Consumer durables will be sold with plans already in place for their disposal. Electronic goods will be designed to be recyclable, with the extra cost added to the retail price as prepayment. As consumers become increasingly concerned about the environment, many big businesses are eagerly adopting sustainable design and brushing up their green credentials to please their customers and stay one step ahead of the competition.

You should spend about 20 minutes on question 28-40, which are based on reading passage 3 on the following pages.

### **Questions 28-32**

Choose the correct letter, A, B, C or D.

Write the correct letter in boxes 28-32 on your answer sheet.

28. What does 'conscience time' imply in paragraph 2?

A People feel guilty when they throw things away easily.

- B The shelf in the garage needs cleaning.
- C The consumers are unaware of the waste problem.
- D The power tool should be place in the right place after being used.

29. Prior to the mass production, people own things to show

- A their quality
- B their status
- C their character
- D their history

30. The word 'narrative' in paragraph 3 refers to

- A the novelty culture pursued by the customers
- B the motivation of buying new products
- C object stories that relate personally and meaningfully to the owners
- D the image created by the manufacturers

31. Without personal connection, people buy new stuff for

- A sharing
- B freshness
- C collection
- D family members

32. The writer quotes the old jeans and teddy bear to illustrate that

A products are used for simple utility.

B producers should create more special stuff to attract the consumers.

C Chapman led a poor childhood life.

D the emotional connections make us to keep the objects for longer.

### Questions 33-36

Complete the summary using the list of words, A-H, below.

Write the correct letter A-H, in boxes 33-36 on your answer sheet.

Tim Cooper claims that although sustainable design proceeds 33....., the coming problems are pushing the move. In accordance with Tim Cooper, Thackara believes that the origins of the looming environmental crises are weight and 34..... The technology which was assumed to have a positive effect on our society actually accelerates the world's 35.....To cure this, Manzini proposes a 'multi-local society' which means every resource should be located and redeployed 36.....

<b>A</b>	properly	<b>B</b>	energy	<b>C</b>	locally
<b>D</b>	economy	<b>E</b>	slowly	<b>F</b>	speed
<b>G</b>	quickly	<b>H</b>	metabolism		

### Questions 37-40

Do the following statements agree with the claims of the writer in Reading Passage? In boxes 37-40 on your answer sheet, write

YES	if the statement is true
-----	--------------------------



NO	if the statement is false
NOT GIVEN	if the information is not given in the passage

37. People often buy things that are seldom used and throw them away.

38. In a post-throwaway society, we will pay extra money after disposing the electronic goods.

39. Some businesses have jumped on the sustainability bandwagon.

40. Company will spend less on repairing in the future.

# Reading Test 4

## SECTION 1

### William Gilbert and Magnetism

**A** 16th and 17th centuries saw two great pioneers of modern science: Galileo and Gilbert. The impact of their findings is eminent. Gilbert was the first modern scientist, also the accredited father of the science of electricity and magnetism, an Englishman of learning and a physician at the court of Elizabeth. Prior to him, all that was known of electricity and magnetism was what the ancients knew, nothing more than that the : lodestone possessed magnetic properties and that amber and jet, when rubbed, would attract bits of paper or other substances of small specific gravity. However, he is less well-known than he deserves.

**B** Gilbert's birth predated Galileo. Born in an eminent local family in Colchester county in the UK, on May 24, 1544, he went to grammar school, and then studied medicine at St. John's College, Cambridge, graduating in 1573. Later he traveled in the continent and eventually settled down in London.

**C** He was a very successful and eminent doctor. All this culminated in his election to the president of the Royal Science Society. He was also appointed the personal physician to the Queen (Elizabeth I) , and later knighted by the Queen. He faithfully served her until her death. However, he didn't outlive the Queen for long and died on December 10, 1603, only a few months after his appointment as personal physician to King James.

**D** Gilbert was first interested in chemistry but later changed his focus due to the large portion of mysticism of alchemy involved (such as the transmutation of metal). He gradually developed his interest in physics after the great minds of the ancient, particularly about the knowledge the ancient Greeks had about lodestones, strange minerals with the power to attract iron. In the meantime, Britain became a major seafaring nation in 1588 when the Spanish Armada was defeated, opening the way to British settlement of

America. British ships depended on the magnetic: compass, yet no one understood why it worked. Did the pole star attract it, as Columbus once speculated; or was there a magnetic mountain at the pole, as described in *Odyssey* which ships would never approach, because the sailors thought its pull would yank out all their iron nails and fittings? For nearly 20 years William Gilbert conducted ingenious experiments to understand magnetism. His works include *On the Magnet and Magnetic Bodies*, *Great Magnet of the Earth*.

**E** Gilbert's discovery was so important to modern physics. He investigated the nature of magnetism and electricity. He even coined the word "electric". Though the early beliefs of magnetism were also largely entangled with superstitions such as that rubbing garlic on lodestone can neutralize its magnetism, one example being that sailors even believed the smell of garlic would even interfere with the action of compass, which is why helmsmen were forbidden to eat it near a ship's compass. Gilbert also found that metals can be magnetized by rubbing materials such as fur, plastic or the like on them. He named the ends of a magnet "north pole" and "south pole". The magnetic poles can attract or repel, depending on polarity. In addition, however, ordinary iron is always attracted to a magnet. Though he started to study the relationship between magnetism and electricity, sadly he didn't complete it. His research of static electricity using amber and jet only demonstrated that objects with electrical charges can work like magnets attracting small pieces of paper and stuff. It is a French guy named du Fay that discovered that there are actually two electrical charges, positive and negative.

**F** He also questioned the traditional astronomical beliefs. Though a Copernican, he didn't express in his quintessential beliefs whether the earth is at the center of the universe or in orbit around the sun. However he believed that stars are not equidistant from the earth, but have their own earth-like planets orbiting around them. The earth is itself like a giant magnet, which is also why compasses always point north. They spin on an axis that is aligned with the earth's polarity. He even likened the polarity of the magnet to the polarity of the earth and built an entire magnetic philosophy on this analogy. In his explanation, magnetism was the soul of the earth. Thus a perfectly spherical lodestone, when aligned with the earth's poles, would wobble all by itself in 24 hours. Further, he also believed

that suns and other stars wobble just like the earth does around a crystal core, and speculated that the moon might also be a magnet caused to orbit by its magnetic attraction to the earth. This was perhaps the first proposal that a force might cause a heavenly orbit.

**G** His research method was revolutionary in that he used experiments rather than pure logic and reasoning like the ancient Greek philosophers did. It was a new attitude toward scientific investigation. Until then, scientific experiments were not in fashion. It was because of this scientific attitude, together with his contribution to our knowledge of magnetism, that a unit of magneto motive force, also known as magnetic potential, was named Gilbert in his honor. His approach of careful observation and experimentation rather than the authoritative opinion or deductive philosophy of others had laid the very foundation for modern science.

### Questions 1-7

Reading passage 1 has seven paragraphs A-G

Choose the correct heading for each paragraph from the list of headings below. Write the correct number i-x in boxes 1-7 on your answer sheet.

List of Headings
i. Early years of Gilbert
ii. What was new about his scientific research method
iii. The development of chemistry
iv. Questioning traditional astronomy
v. Pioneers of the early science
vi. Professional and social recognition
vii. Becoming the president of the Royal Science Society

- viii. The great works of Gilbert
- ix. His discovery about magnetism
- x. His change of focus

1. Paragraph A
2. Paragraph B
3. Paragraph C
4. Paragraph D
5. Paragraph E
6. Paragraph F
7. Paragraph G

### Questions 8-10

Do the following statements agree with the information given in Reading Passage 1? In boxes 8-10 on your answer sheet write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

8. He is less famous than he should be.
9. He was famous as a doctor before he was employed by the Queen
10. He lost faith in the medical theories of his time.

### Questions 11-13

Choose THREE letters A-F.

Write your answers in boxes 11-13 on your answer sheet.

Which THREE of the following are parts of Gilbert's discovery?

A Metal can be transformed into another.

B Garlic can remove magnetism.

C Metals can be magnetized.

D Stars are at different distances from the earth.

E The earth wobbles on its axis.

F There are two charges of electricity.

## **SECTION 2**

### **Seed Hunting**

**A** With quarter of the world's plants set to vanish within the next 50 years, Dough Alexander reports on the scientists working against the clock to preserve the Earth's botanical heritage. They travel the four corners of the globe, scouring jungles, forests and savannas. But they're not looking for ancient artefacts, lost treasure or undiscovered tombs. Just pods. It may lack the romantic allure of archaeology, or the whiff of danger that accompanies going after big game, but seed hunting is an increasingly serious business. Some seek seeds for profit—hunters in the employ of biotechnology firms, pharmaceutical companies and private corporations on the lookout for species that will yield the drugs or crops of the future. Others collect to conserve, working to halt the sad slide into extinction facing so many plant species.

**B** Among the pioneers of this botanical treasure hunt was John Tradescant, an English royal gardener who brought back plants and seeds from his journeys abroad in the early

1600s. Later, the English botanist Sir Joseph Banks who was the first director of the Royal Botanic Gardens at Kew and travelled with Captain James Cook on his voyages near the end of the 18th century—was so driven to expand his collections that he sent botanists around the world at his own expense.

**C** Those heady days of exploration and discovery may be over, but they have been replaced by a pressing need to preserve our natural history for the future. This modern mission drives hunters such as Dr Michiel van Slageren, a good-natured Dutchman who often sports a wide-brimmed hat in the field—he could easily be mistaken for the cinematic hero Indiana Jones. He and three other seed hunters work at the Millennium Seed Bank, an 80 million [pounds sterling] international conservation project that aims to protect the world's most endangered wild plant species

**D** The group's headquarters are in a modern glass-and-concrete structure on a 200-hectare Estate at Wakehurst Place in the West Sussex countryside. Within its underground vaults are 260 million dried seeds from 122 countries, all stored at -20 Celsius to survive for centuries. Among the 5, 100 species represented are virtually all of Britain's 1,400 native seed-bearing plants, the most complete such collection of any country's flora.

**E** Overseen by the Royal botanic gardens, the Millennium Seed Bank is the world's largest wild-plant depository. It aims to collect 24,000 species by 2010. The reason is simple: thanks to humanity's efforts, an estimated 25 per cent of the world's plants are on the verge of extinction and may vanish within 50 years. We're currently responsible for habitat destruction on an unprecedented scale, and during the past 400 years, plant species extinction rates have been about 70 times greater than those indicated by the geological record as being 'normal'. Experts predict that during the next 50 years a further one billion hectares of wilderness will be converted to farmland in developing countries alone.

**F** The implications of this loss are enormous. Besides providing staple food crops, plants are a source of many medicines and the principal supply of fuel and building materials in

many parts of the world. They also protect soil and help regulate the climate. Yet, across the globe, plant species are being driven to extinction before their potential benefits are discovered.

**G** The world Conservation Union has listed 5,714 threatened species is sure to be much higher. In the UK alone, 300 wild plant species are classified as endangered. The Millennium Seed Bank aims to ensure that even if a plant becomes extinct in the wild, it won't be lost forever.

Stored seeds can be used the help restore damaged or destroyed environment or in scientific research to find new benefits for society in medicine, agriculture or local industry that would otherwise be lost.

**H** Seed banks are an insurance policy to protect the world's plant heritage for the future, explains Dr Paul Smith, another Kew seed hunter. "Seed conservation techniques were originally developed by farmers" he says. "Storage is the basis what we do, conserving seeds until you can use them just as in farming." Smith says there's no reason why any plant species should become extinct, given today's technology. But he admits that the biggest challenge is finding, naming and categorising all the world's plants. And someone has to gather these seeds before it's too late. "There aren't a lot of people out there doing this," he says" The key is to know the flora from a particular area, and that knowledge takes years to acquire."

**I** There are about 1,470 seed banks scattered around the globe, with a combined total of 5.4 million samples, of which perhaps two million are distinct non-duplicates. Most preserve genetic material for agriculture use in order to ensure crop diversity; others aim to conserve wild species, although only 15 per cent of all banked plants are wild.

**J** Imperial College, London, examined crop collections from 151 countries and found that while the number of plant samples had increased in two thirds of the countries, budget had been cut in a quarter and remained static in another 35 per cent. The UN's Food and Agriculture Organization and the Consultative Group on International Agricultural



Research has since set up the Global Conservation Trust, which aims to raise US \$260 million to protect seed banks in perpetuity.

### Questions 14-19

Do the following statements agree with the information given in Reading Passage 2? In boxes 14-19 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

14. The purpose of collecting seeds now is different from the past
15. The millennium seed bank is the earliest seed bank.
16. One of major threats for plant species extinction is farmland expansion into wildness.
17. The approach that scientists apply to store seeds is similar to that used by farmers.
18. technological development is the only hope to save plant species.
19. The works of seed conservation are often limited by financial problems.

### Questions 20-24

#### Summary

Complete the following summary of the paragraphs of Reading Passage 2, using no more than three words from the Reading Passage for each answer. Write your answers in boxes 20-24 on your answer sheet.

Some people collect seeds for the purpose of protecting certain species from \_\_\_\_\_ 20 \_\_\_\_\_ ; others collect seeds for their ability to produce \_\_\_\_\_ 21 \_\_\_\_\_. They are called seed hunters.

The \_\_\_\_\_ 22 \_\_\_\_\_ of them included both gardeners and botanists , such as \_\_\_\_\_ 23 \_\_\_\_\_ , who financially supported collectors out of his own pocket. The seeds collected are usually stored in seed banks, one of which is the famous millennium seed bank, where seeds are all stored in the \_\_\_\_\_ 24 \_\_\_\_\_ at a low temperature.

### **Questions 25-26**

Choose the correct letter, A-E.

Write your answers in boxes 25, 26 on your answer sheet.

Which TWO of the followings are provided by plants to the human ?

A food

B fuels

C clothes

D energy

E commercial products

## **SECTION 3**

### **The Power of Nothing**

**Geoff Watts, New Scientist (May 26th, 2001)**

**A** Want to devise a new form of alternative medicine? No problem. Here is the recipe. Be warm, sympathetic, reassuring and enthusiastic. Your treatment should involve physical contact, and each session with your patients should last at least half an hour, treatment and understand how their disorders relate to the rest of their lives. Tell them that their

own bodies possess the true power to heal. Make them pay you out of their own pockets. Describe your treatment in familiar words, but embroidered with a hint of mysticism: energy fields, energy flows, energy blocks, meridians, forces, auras, rhythms and the like. Refer to the K J knowledge of an earlier age: wisdom carelessly swept aside by the rise and rise of blind, mechanistic science. Oh, come off it, you are saying. Something invented off the top of your head could not possibly work, could it?

**B** Well yes, it could - and often well enough to earn you living. A good living if you are sufficiently convincing, or better still, really believe in your therapy. Many illnesses get better on their own, so if you are lucky and administer your treatment at just the right time you will get the credit. But that's only part of it. Some of the improvement really would be down to you. Your healing power would be the outcome of a paradoxical force that conventional medicine recognizes but remains oddly ambivalent about: the placebo effect.

**C** Placebos are treatments that have no direct effect on the body, yet still work because the patient has faith in their power to heal. Most often the term refers to a dummy pill, but it applies just as much to any device or procedure, from a sticking plaster to a crystal to an operation. The existence of the placebo effect implies that even quackery may confer real benefits, which is why any mention of placebo is a touchy subject for many practitioners of complementary and alternative medicine, who are likely to regard it as tantamount to a charge of charlatanism. In fact, the placebo effect is a powerful part of all medical care, orthodox or otherwise, though its role is often neglected or misunderstood.

**D** One of the great strengths of CAM may be its practioners' skill in deploying the placebo effect to accomplish real healing. "Complementary practitioners are miles better at producing non-specific effects and good therapeutic relationships," says Edzard Ernst, professor of CAM at Exeter University. The question is whether CAM could be integrated into conventional medicine, as some would like, without losing much of this power.

**E** At one level, it should come as no surprise that our state of mind can influence our physiology: anger opens the superficial blood vessels of the face; sadness pumps the

tear glands. But exactly how placebos work their medical magic is still largely unknown. Most of the scant research done so far has focused on the control of pain, because it's one of the commonest complaints and lends itself to experimental study. Here, attention has turned to the endorphins, morphine-like neurochemicals known to help control pain.

**F** But exactly how placebos work their medical magic is still largely unknown. Most of the scant research to date has focused on the control of pain, because it's one of the commonest complaints and lends itself to experimental study. Here, attention has turned to the endorphins, natural counterparts of morphine that are known to help control pain. "Any of the neurochemicals involved in transmitting pain impulses or modulating them might also be involved in generating the placebo response," says Don Price, an oral surgeon at the University of Florida who studies the placebo effect in dental pain.

**G** "But endorphins are still out in front." That case has been strengthened by the recent work of Fabrizio Benedetti of the University of Turin, who showed that the placebo effect can be abolished by a drug, naloxone, which blocks the effects of endorphins. Benedetti induced pain in human volunteers by inflating a blood-pressure cuff on the forearm. He did this several times a day for several days, using morphine each time to control the pain. On the final day, without saying anything, he replaced the morphine with a saline solution. This still relieved the subjects' pain: a placebo effect. But when he added naloxone to the saline the pain relief disappeared. Here was direct proof that placebo analgesia is mediated, at least in part, by these natural opiates

**H** Still, no one knows how belief triggers endorphin release, or why most people can't achieve placebo pain relief simply by willing it. Though scientists don't know exactly how placebos work, they have accumulated a fair bit of knowledge about how to trigger the effect. A London rheumatologist found, for example, that red dummy capsules made more effective painkillers than blue, green or yellow ones. Research on American students revealed that blue pills make better sedatives than pink, a colour more suitable for stimulants. Even branding can make a difference: if Aspro or Tylenol are what you like to take for a headache, their chemically identical generic equivalents may be less effective.

**I** It matters, too, how the treatment is delivered. Decades ago, when the major tranquilliser chlorpromazine was being introduced, a doctor in Kansas categorised his colleagues according to whether they were keen on it, openly sceptical of its benefits, or took a "let's try and see, ' attitude. His conclusion: the more enthusiastic the doctor, the better the drug performed. And this, year Ernst surveyed published studies that compared doctors' bedside manners. The studies turned up one consistent finding: "Physicians who adopt a warm, friendly and reassuring manner," he reported, "are more effective than those whose consultations are formal and do not offer reassurance"

**J** Warm, friendly and reassuring are precisely CAM, 's strong suits, of course. Many of the ingredients of that opening recipe — the physical contact, the generous swathes of time, the strong hints of supernormal healing power — are just the kind of thing likely to impress patients. It's hardly surprising, then, that complementary practitioners are generally best at mobilising the placebo effect, says Arthur Kleinman, professor of social anthropology at Harvard University.

### **Questions 27-32**

Use the information in the passage to match the deed (listed A-H) with people below. Write the appropriate letters A-H in boxes 27-32 on your answer sheet.

NB you may use any letter more than once

A Should easily be understood

B should improve by itself

C Should not involve any mysticism

D Ought to last a minimum length of time.

E Needs to be treated at the right time.

F Should give more recognition.

G Can earn valuable money.

H Do not rely on any specific treatment

27. Appointments with alternative practitioner

28. An alternative practitioners description of treatment

29. An alternative practitioner who has faith in what he does

30. The illness of patients convinced of alternative practice

31. Improvements of patients receiving alternative practice

32. Conventional medical doctors (who is aware of placebo)

### **Questions 33-35**

Choose the correct letter, A, B, C or D.

Write your answers in boxes 33-35 on your answer sheet.,

33. In the fifth paragraph, the writer uses the example of anger and sadness to illustrate that:

A People's feeling could affect their physical behaviour

B Scientists don't understand how the mind influences the body.

C Research on the placebo effect is very limited

D How placebo achieves its effect is yet to be understood.

34. Research on pain control attracts most of the attention because

A Scientists have discovered that endorphins can help to reduce pain.

B Only a limited number of researchers gain relevant experience

C Pain reducing agents might also be involved in placebo effect.

D Patients often experience pain and like to complain about it

35. Fabrizio Benedetti's research on endorphins indicates that

A They are widely used to regulate pain.

B They can be produced by willM thoughts

C They can be neutralized by introducing naloxone.

D Their pain-relieving effects do not last long enough.

### Questions 36-40

Do the following statements agree with the information given in Reading Passage 3? In boxes 36-40 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

36. There is enough information for scientists to fully understand the placebo effect.

37. A London based researcher discovered that red pills should be taken off the market.

38. People's preference on brands would also have effect on their healing.

39. Medical doctors have a range of views of the newly introduced drug of

40. Alternative practitioners are seldom known for applying placebo effect.

# Reading Test 5

## SECTION 1

### Going Bananas

**A** The world's favourite fruit could disappear forever in 10 years' time. The banana is among the world's oldest crops. Agricultural scientists believe that the first edible banana was discovered around ten thousand years ago. It has been at an evolutionary standstill ever since it was first propagated in the jungles of South-East Asia at the end of the last ice age. Normally the wild banana, a giant jungle herb called *Musa acuminata*, contains a mass of hard seeds that make the fruit virtually inedible. But now and then, hunter-gatherers must have discovered rare mutant plants that produced seed-less, edible fruits. Geneticists now know that the vast majority of these soft-fruited plants resulted from genetic accidents that gave their cells three copies of each chromosome instead of the usual two. This imbalance prevents seeds and pollen from developing normally, rendering the mutant plants sterile. And that is why some scientists believe the world's most popular fruit could be doomed. It lacks the genetic diversity to fight off pests and diseases that are invading the banana plantations of Central America and the small-holdings of Africa and Asia alike.

**B** In some ways, the banana today resembles the potato before blight brought famine to Ireland a century and a half ago. But "it holds a lesson for other crops, too", says Emile Frison, top banana at the International Network for the Improvement of Banana and Plantain in Montpellier, France. "The state of the banana,, , Frison warns, "can teach a broader lesson the increasing standardisation of food crops round the world is threatening their ability to adapt and survive."

**C** The first Stone Age plant breeders cultivated these sterile freaks by replanting cuttings from their stems. And the descendants of those original cuttings are the bananas we still eat today. Each is a virtual clone, almost devoid of genetic diversity. And that uniformity makes it ripe for disease like no other crop on Earth. Traditional varieties of sexually



reproducing crops have always had a much broader genetic base, and the genes will recombine in new arrangements in each generation. This gives them much greater flexibility in evolving responses to disease - and far more genetic resources to draw on in the face of an attack. But that advantage is fading fast, as growers increasingly plant the same few, high-yielding varieties. Plant breeders work feverishly to maintain resistance in these standardized crops. Should these efforts falter, yields of even the most productive crop could swiftly crash. "When some pest or disease comes along, severe epidemics can occur, " says Geoff Hawtin, director of the Rome-based International Plant Genetic Resources Institute.

**D** The banana is an excellent case in point. Until the 1950s, one variety, the Gros Michel, dominated the world's commercial banana business. Found by French botanists in Asia in the 1820s, the Gros Michel was by all accounts a fine banana, richer and sweeter than today's standard banana and without the latter's bitter aftertaste when green. But it was vulnerable to a soil fungus that produced a wilt known as Panama disease. "Once the fungus gets into the soil it remains there for many years. There is nothing farmers can do. Even chemical spraying won't get rid of it, " says Rodomiro Ortiz, director of the International Institute for Tropical Agriculture in Ibadan, Nigeria. So plantation owners played a running game, abandoning infested fields and moving to "clean" land \_ until they ran out of clean land in the 1950s and had to abandon the Gros Michel. Its successor, and still the reigning commercial king, is the Cavendish banana, a 19th-century British discovery from southern China. The Cavendish is resistant to Panama disease and, as a result, it literally saved the international banana industry. During the 1960s, it replaced the Gros Michel on supermarket shelves. If you buy a banana today, it is almost certainly a Cavendish. But even so, it is a minority in the world's banana crop.

**E** Half a billion people in Asia and Africa depend on bananas. Bananas provide the largest source of calories and are eaten daily. Its name is synonymous with food. But the day of reckoning may be coming for the Cavendish and its indigenous kin. Another fungal disease, black Sigatoka, has become a global epidemic since its first appearance in Fiji in 1963. Left to itself, black Sigatoka which causes brown wounds on leaves and pre-

mature fruit ripening - cuts fruit yields by 50 to 70 per cent and reduces the productive lifetime of banana plants from 30 years to as little as 2 or 3. Commercial growers keep Sigatoka at bay by a massive chemical assault. Forty sprayings of fungicide a year is typical. But despite the fungicides, diseases such as black Sigatoka are getting more and more difficult to control. "As soon as you bring in a new fungicide, they develop resistance", says Frison. "One thing we can be sure of is that the Sigatoka won't lose in this battle." Poor farmers, who cannot afford chemicals, have it even worse. They can do little more than watch their plants die. "Most of the banana fields in Amazonia have already been destroyed by the disease," says Luadir Gasparotto, Brazil's leading banana pathologist with the government research agency EMBRAPA. Production is likely to fall by 70 percent as the disease spreads, he predicts. The only option will be to find a new variety.

**F** But how? Almost all edible varieties are susceptible to the diseases, so growers cannot simply change to a different banana. With most crops, such a threat would unleash an army of breeders, scouring the world for resistant relatives whose traits they can breed into commercial varieties. Not so with the banana. Because all edible varieties are sterile, bringing in new genetic traits to help cope with pests and diseases is nearly impossible. Nearly, but not totally. Very rarely, a sterile banana will experience a genetic accident that allows an almost normal seed to develop, giving breeders a tiny window for improvement. Breeders at the Honduran Foundation of Agricultural Research have tried to exploit this to create disease-resistant varieties. Further backcrossing with wild bananas yielded a new seedless banana resistant to both black Sigatoka and Panama disease.

**G** Neither Western supermarket consumers nor peasant growers like the new hybrid. Some accuse it of tasting more like an apple than a banana. Not surprisingly, the majority of plant breeders have till now turned their backs on the banana and got to work on easier plants. And commercial banana companies are now washing their hands of the whole breeding effort, preferring to fund a search for new fungicides instead. "We supported a breeding programme for 40 years, but it wasn't able to develop an alternative to Cavendish. It was very expensive and we got nothing back," says Ronald Romero, head

of research at Chiquita, one of the Big Three companies that dominate the international banana trade.

**H** Last year, a global consortium of scientists led by Frison announced plans to sequence the banana genome within five years. It would be the first edible fruit to be sequenced. Well, almost edible. The group will actually be sequencing inedible wild bananas from East Asia because many of these are resistant to black Sigatoka. If they can pinpoint the genes that help these wild varieties to resist black Sigatoka, the protective genes could be introduced into laboratory tissue cultures of cells from edible varieties. These could then be propagated into new, resistant plants and passed on to farmers.

**I** It sounds promising, but the big banana companies have, until now, refused to get involved in GM research for fear of alienating their customers. "Biotechnology is extremely expensive and there are serious questions about consumer acceptance,"<sup>11</sup> says David McLaughlin, Chiquita's senior director for environmental affairs. With scant funding from the companies, the banana genome researchers are focusing on the other end of the spectrum. Even if they can identify the crucial genes, they will be a long way from developing new varieties that smallholders will find suitable and affordable. But whatever biotechnology's academic interest, it is the only hope for the banana. Without banana production worldwide will head into a tailspin. We may even see the extinction of the banana as both a lifesaver for hungry and impoverished Africans and as the most popular product on the world's supermarket shelves.

### **Questions 1-3**

Complete the sentences below with NO MORE THAN THREE WORDS from the passage.

In boxes 1-3 on your answer sheet, write

Write your answers in boxes 1-3 on your answer sheet

1. Banana was first eaten as a fruit by humans .....years ago.

2. Banana was first planted in.....

3. Wild banana's taste is adversely affected by its.....

### **Questions 4-10**

Look at the following statements (Questions 4-10) and the list of people below Match each statement with the correct person, A-I.

Write the correct letter: A-I, in boxes 4-10 On your answer sheet.

NB You may use any letter more than once.

4. Pest invasion may seriously damage banana industry.

5. The effect of fungal infection in soil is often long-lasting.

6. A commercial manufacturer gave up on breeding bananas for disease resistant

7. Banana disease may develop resistance to chemical sprays.

8. A banana disease has destroyed a large number of banana plantations.

9. Consumers would not accept genetically altered crop.

10. Lessons can be learned from bananas for other crops.

### **List of People**

A Rodomiro

B David Maclaughlin

C Emile Frison

D Ronald Romero

E Luadir Gasparotto

F Geoff Hawtin

### Questions 11-13

Do the following statements agree with the information given in Reading Passage 1?

In boxes 11-13 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

11. Banana is the oldest known fruit
12. Gros Michel is still being used as a commercial product
13. Banana is a main food in some countries

## SECTION 2

### Computer Provides More Questions Than Answers

**A** The island of Antikythera lies 18 miles north of Crete, where the Aegean Sea meets the Mediterranean. Currents there can make shipping treacherous and one ship bound for ancient Rome never made it. The ship that sank there was a giant cargo vessel measuring nearly 500 feet long. It came to rest about 200 feet below the surface, where it stayed for more than 2,000 years until divers looking for sponges discovered the wreck a little more than a century ago.

**B** Inside the hull were a number of bronze and marble statues. From the look of things, the ship seemed to be carrying luxury items, probably made in various Greek islands and bound for wealthy patrons in the growing Roman Empire. The statues were retrieved, along with a lot of other unimportant stuff, and stored. Nine months later, an enterprising

archaeologist cleared off a layer of organic material from one of the pieces of junk and found that it looked like a gearwheel. It had inscriptions in Greek characters and seemed to have something to do with astronomy.

**C** That piece of “Junk” went on to become the most celebrated find from the shipwreck; it is displayed at the National Archaeological Museum of Athens. Research has shown that the wheel was part of a device so sophisticated that its complexity would not be matched for a thousand years — it was also the world's first known analog computer. The device is so famous that an international conference organized in Athens a couple of weeks ago had only one subject: the Antikythera Mechanism.

**D** Every discovery about the device has raised new questions. Who built the device, and for what purpose? Why did the technology behind it disappear for the next thousand years? What does the device tell us about ancient Greek culture? And does the marvelous construction, and the precise knowledge of the movement of the sun and moon and Earth that it implies, tell us how the ancients grappled with ideas about determinism and human destiny?

**E** “We have gear trains from the 9th century in Baghdad used for simpler displays of the solar and lunar motions relative to one another — they use eight gears,” said Francois Charette, a historian of science in Germany who wrote an editorial accompanying a new study of the mechanism two weeks ago in the journal *Nature*. “In this case, we have more than 30 gears. To see it on a computer animation makes it mind-boggling. There is no doubt it was a technological masterpiece.”

**F** The device was probably built between 100 and 140 BC, and the understanding of astronomy it displays seems to have been based on knowledge developed by the Babylonians around 300-700 BC, said Mike Edmunds, a professor of astrophysics at Cardiff University in Britain. He led a research team that reconstructed what the gear mechanism would have looked like by using advanced three-dimensional-imaging technology. The group also decoded a number of the inscriptions. The mechanism explores the relationship between lunar months — the time it takes for the moon to cycle

through its phases, say, full moon to full moon -and calendar years. The gears had to be cut precisely to reflect this complex relationship; 19 calendar years equal 235 lunar months.

**G** By turning the gear mechanism, which included what Edmunds called a beautiful system of epicyclic gears that factored in the elliptical orbit of the moon, a person could check what the sky would have looked like on a date in the past, or how it would appear in the future. The mechanism was encased in a box with doors in front and back covered with inscriptions -- a sort of instruction manual. Inside the front door were pointers indicating the date and the position of the sun, moon and zodiac, while opening the back door revealed the relationship between calendar years and lunar months, and a mechanism to predict eclipses.

**H** "If they needed to know when eclipses would occur, and this related to the rising and setting of stars and related them to dates and religious experiences, the mechanism would directly help, " said Yanis Bitsakis, a physicist at the University of Athens who co-wrote the Nature paper. "It is a mechanical computer. You turn the handle and you have a date on the front." Building it would have been expensive and required the interaction of astronomer, engineers, intellectuals and craftspeople. Charette said the device overturned conventional ideas that the ancient Greeks were primarily ivory tower thinkers who did not deign to muddy their hands with technical stuff. It is a reminder, he said, that while the study of history often focuses on written texts, they can tell us only a fraction of what went on at a particular time.

**I** Imagine a future historian encountering philosophy texts written in our time ~ and an aircraft engine. The books would tell that researcher what a few scholars were thinking today, but the engine would give them a far better window into how technology influenced our everyday lives. Charette said it was unlikely that the device was used by practitioners of astrology, then still in its infancy. More likely, he said, it was bound for a mantelpiece in some rich Roman's home. Given that astronomers of the time already knew how to calculate the positions of the sun and the moon and to predict eclipses without the device,

it would have been the equivalent of a device built for a planetarium today \_\_ something to spur popular interest, or at least claim bragging rights.

**J** Why was the technology that went into the device lost? "The time this was built, the jackboot of Rome was coming through," Edmunds said. "The Romans were good at town planning and sanitation but were not known for their interest in science." The fact that the device was so complex, and that it was being shipped with a quantity of other luxury items, tells Edmunds that it is very unlikely to have been the one ever made. Its sophistication "is such that it can't have been the only one," Edmunds said. "There must have been a tradition of making them. We're always hopeful a better one will surface." Indeed, he said, he hopes that his study and the renewed interest in the Antikythera Mechanism will prompt second looks by both amateurs and professionals around the world. "The archaeological world may look in their cupboards and maybe say, "That isn't a bit of rusty old metal in the cupboard."

### **Questions 14-18**

The reading Passage has ten paragraphs A- J.

Which paragraph contains the following information?

Write the correct letter A-J, in boxes 14-18 on your answer sheet.

- 14. Content inside the wreck ship
- 15. Ancient astronomers and craftsman might involve
- 16. The location of Antikythera Mechanism
- 17. Details of how it was found
- 18. Appearance and structure of the mechanism

### **Questions 19-22**



## Summary

Complete the following summary of the paragraphs of Reading Passage, using **no more than two** words from the Reading Passage for each answer. Write your answers in boxes 19-22 on your answer sheet.

An ancient huge sunk \_\_\_\_\_ 19\_\_\_\_\_ was found accidentally by sponges searcher. The ship loaded with \_\_\_\_\_ 20\_\_\_\_\_ such as bronze and sculptures. However, an archaeologist found a junk similar to a \_\_\_\_\_ 21\_\_\_\_\_ which has Greek script on it. This inspiring and elaborated device was found to be the first \_\_\_\_\_ 22 \_\_\_\_\_ in the world.

## Questions 23-26

Use the information in the passage to match the people (listed A-C) with opinions or deeds below. Write the appropriate letters A-F in boxes 23-27 on your answer sheet.

NB you may use any letter more than once

A Yanis Bitsakis

B Mike Edmunds

C Francois Charette

23. More complicated than previous device

24. Anticipate to find more Antikythera Mechanism in the future

25. Antikythera Mechanism was found related to moon

26. Mechanism assisted ancient people to calculate movement of stars.

## SECTION 3

### Save Endangered Language

"Obviously we must do some serious rethinking of our priorities, lest linguistics go down in history as the only science that presided obviously over the disappearance of 90 percent of the very field to which it is dedicated." - Michael Krauss, "The World's Languages in Crisis".

**A** Ten years ago Michael Krauss sent a shudder through the discipline of linguistics with his prediction that half the 6,000 or so languages spoken in the world would cease to be uttered within a century.

Unless scientists and community leaders directed a worldwide effort to stabilize the decline of local languages, he warned, nine tenths of the linguistic diversity of humankind would probably be doomed to extinction. Krauss's prediction was little more than an educated guess, but other respected linguists had been clanging out similar alarms. Kenneth L. Hale of the Massachusetts Institute of Technology noted in the same journal issue that eight languages on which he had done fieldwork had since passed into extinction. A 1990 survey in Australia found that 70 of the 90 surviving Aboriginal languages were no longer used regularly by all age groups. The same was true for all but 20 of the 175 Native American languages spoken or remembered in the US, Krauss told a congressional panel in 1992.

**B** Many experts in the field mourn the loss of rare languages, for several reasons. To start, there is scientific self-interest: some of the most basic questions in linguistics have to do with the limits of human speech, which are far from fully explored. Many researchers would like to know which structural elements of grammar and vocabulary—if any are truly universal and probably therefore hardwired into the human brain. Other scientists try to reconstruct ancient migration patterns by comparing borrowed words that appear in otherwise unrelated languages. In each of these cases, the wider the portfolio of languages you study, the more likely you are to get the right answers.

**C** Despite the near constant buzz in linguistics about endangered languages over the past 10 years, the field has accomplished depressingly little. “You would think that there would be some organized response to this dire situation”, some attempt to determine which language can be saved and which should be documented before they disappear, says Sarah G. Thomason, a linguist at the University of Michigan at Ann Arbor. “But there isn’t any such effort organized in the profession. It is only recently that it has become fashionable enough to work on endangered languages.<sup>55</sup> Six years ago, recalls Douglas H. Whalen of Yale University, “when I asked linguists who was raising money to deal with these problems, I mostly got blank stares.” So Whalen and a few other linguists founded the Endangered Languages Fund. In the five years to 2001 they were able to collect only \$80,000 for research grants. A similar foundation in England, directed by Nicholas Ostler, has raised just \$8,000 since 1995.

**D** But there are encouraging signs that the field has turned a corner. The Volkswagen Foundation, a German charity, just issued its second round of grants totaling more than \$2 million. It has created a multimedia archive at the Max Planck Institute for Psycholinguistics in the Netherlands that can house recordings, grammars, dictionaries and other data on endangered languages. To fill the archive, the foundation has dispatched field linguists to document Aweti (100 or so speakers in Brazil), Ega (about 300 speakers in Ivory Coast), Waimaa (a few hundred speakers in East Timor), and a dozen or so other languages unlikely to survive the century. The Ford Foundation has also edged into the arena. Its contributions helped to reinvigorate a master-apprentice program created in 1992 by Leanne Hinton of Berkeley and Native Americans worried about the imminent demise of about 50 indigenous languages in California. Fluent speakers receive \$3,000 to teach a younger relative (who is also paid) their native tongue through 360 hours of shared activities, spread over six months. So far about 5 teams have completed the program, Hinton says, transmitting at least some knowledge of 25 languages. “It’s too early to call this language revitalization,” Hinton admits. “In California the death rate of elderly speakers will always be greater than the recruitment rate of young speakers. But at least we prolong the survival of the language•” That will give linguists more time to record these tongues before they vanish.

**E** But the master-apprentice approach hasn't caught on outside the U.S., and Hinton's effort is a drop in the sea. At least 440 languages have been reduced to a mere handful of elders, according to the Ethnologue, a catalogue of languages produced by the Dallas-based group SIL International that comes closest to global coverage. For the vast majority of these languages, there is little or no record of their grammar, vocabulary, pronunciation or use in daily life. Even if a language has been fully documented, all that remains once it vanishes from active use is a fossil skeleton, a scattering of features that the scientist was lucky and astute enough to capture. Linguists may be able to sketch an outline of the forgotten language and fix its place on the evolutionary tree, but little more. "How did people start conversations and talk to babies? How did husbands and wives converse?" Hinton asks. "Those are the first things you want to learn when you want to revitalize the language."

**F** But there is as yet no discipline of "conservation linguistics" as there is for biology. Almost every strategy tried so far has succeeded in some places but failed in others, and there seems to be no way to predict with certainty what will work where. Twenty years ago in New Zealand, Maori speakers set up "language nests," in which preschoolers were immersed in the native language. Additional Maori-only classes were added as the children progressed through elementary and secondary school. A similar approach was tried in Hawaii, with some success - the number of native speakers has stabilized at 1,000 or so, reports Joseph E. Grimes of SIL International, who is working on Oahu. Students can now get instruction in Hawaiian all the way through university.

**G** One factor that always seems to occur in the demise of a language is that the speakers begin to have collective doubts about the usefulness of language loyalty. Once they start regarding their own language as inferior to the majority language, people stop using it for all situations. Kids pick up on the attitude and prefer the dominant language. In many cases, people don't notice until they suddenly realize that their kids never speak the language, even at home. This is how Cornish and some dialects of Scottish Gaelic is still only rarely used for daily home life in Ireland, 80 years after the republic was founded with Irish as its first official language.

**H** Linguists agree that ultimately, the answer to the problem of language extinction is multilingualism. Even uneducated people can learn several languages, as long as they start as children. Indeed, most people in the world speak more than one tongue, and in places such as Cameroon (279 languages), Papua New Guinea (823) and India (387) it is common to speak three or four distinct languages and a dialect or two as well. Most Americans and Canadians, to the west of Quebec, have a gut reaction that anyone speaking another language in front of them is committing an immoral act. You get the same reaction in Australia and Russia. It is no coincidence that these are the areas where languages are disappearing the fastest. The first step in saving dying languages is to persuade the world's majorities to allow the minorities among them to speak with their own voices.

### **Questions 27-33**

The reading passage has eight paragraphs, A-H

Choose the correct heading for paragraphs A-H from the list below.

Write the correct number, i – xi, in boxes 27-33 on your answer sheet.

### **List of Headings**

- i. data consistency needed for language
- ii. consensus on an initiative recommendation for saving dying out languages
- iii. positive gains for protection
- iv. minimum requirement for saving a language
- v. Potential threat to minority language
- vi. a period when there was absent of real effort made.
- vii. native language programs launched
- viii. Lack in confidence in young speakers as a negative factor
- ix. Practise in several developing countries

- x. Value of minority language to linguists.
- xi. government participation in language field

27. Paragraph A

28. Paragraph B

29. Paragraph D

30. Paragraph E

31. Paragraph F

32. Paragraph G

33. Paragraph H

Example: Paragraph C

### **Questions 34-38**

Use the information in the passage to match the people (listed A-F) with opinions or deeds below. Write the appropriate letters A-F in boxes 34-38 on your answer sheet.

A Nicholas Ostler

B Michael Krauss

C Joseph E. Grimes

D Sarah G. Thomason

E Kenneth L. Hale

F Douglas H. Whalen

34. Reported language conservation practice in Hawaii

35. Predicted that many languages would disappear soon

36. Experienced process that languages die out personally

37. Raised language fund in England

38. Not enough effort on saving until recent work

**Questions 39-40**

Choose the correct letter, A, B, C or D.

Write your answers in boxes 39-40 on your answer sheet.

39. What is real result of master-apprentice program sponsored by The Ford Foundation!

A Teach children how to speak

B Revive some endangered languages in California

C postpone the dying date for some endangered languages

D Increase communication between students

40. What should majority language speakers do according to the last paragraph?

A They should teach their children endangered language in free lessons

B They should learn at least four languages

C They should show their loyalty to a dying language

D They should be more tolerant to minority language speaker

# Reading Test 6

## SECTION 1

### Eco-Resort Management Practices

#### A

Ecotourism is often regarded as a form of nature-based tourism and has become an important alternative source of tourists. In addition to providing the traditional resort-leisure product, it has been argued that ecotourism resort management should have a particular focus on best-practice environmental management, an educational and interpretive component, and direct and indirect contributions to the conservation of the natural and cultural environment (Ayala, 1996).

#### B

Couran Cove Island Resort is a large integrated ecotourism-based resort located south of Brisbane on the Gold Coast, Queensland, and Australia. As the world's population becomes increasingly urbanised, the demand for tourist attractions which are environmentally friendly, serene and offer amenities of a unique nature, has grown rapidly. Couran Cove Resort, which is one such tourist attractions, is located on South Stradbroke Island, occupying approximately 150 hectares of the island. South Stradbroke Island is separated from the mainland by the Broadwater, a stretch of sea 3 kilometers wide. More than a century ago, there was only one Stradbroke Island, and there were at least four aboriginal tribes living and hunting on the island. Regrettably, most of the original island dwellers were eventually killed by diseases such as tuberculosis, smallpox and influenza by the end of the 19th century. The second ship wreck on the island in 1894, and the subsequent destruction of the ship (the *Cambus Wallace*) because it contained dynamite, caused a large crater in the sandhills on Stradbroke Island. Eventually, the ocean broke through the weakened land form and Stradbroke became two islands. Couran Cove Island Resort is built on one of the world's few naturally-occurring sand lands, which is home to a wide range of plant communities and one of the largest remaining remnants of the rare *livistona* Rainforest left on the Gold Coast. Many



mangrove and rainforest areas and Malaleuca Wetlands on South Stradbroke Island (and in Queensland), have been cleared, drained or filled for residential, industrial, agricultural or urban development in the first half of the 20th century. Farmers and graziers finally abandoned South Stradbroke Island in 1939 because the vegetation and the soil conditions there were not suitable for agricultural activities.

## **SUSTAINABLE PRACTICES OF COURAN COVE RESORT**

Being located on an offshore island, the resort is only accessible by means of water transportation. The resort provides hourly ferry service from the marina on the mainland to and from the island. Within the resort, transport modes include walking trails, bicycle tracks and the beach train.

The reception area is the counter of the shop which has not changed in 8 years at least. The accommodation is an octagonal "Bure". These are large rooms that are clean but! The equipment is tired and in some cases just working. Our ceiling fan only worked on high speed for example. Beds are hard but clean, there is television, radio, an old air conditioner and a small fridge. These "Bures" are right on top of each other and night noises do carry so be careful what you say and do. The only thing is the mosquitos but if you forget to bring mosquito repellent they sell some on the island.

As an ecotourism-based resort, most of the planning and development of the attraction has been concentrated on the need to co-exist with the fragile natural environment of South Stradbroke Island to achieve sustainable development.

## **WATER AND ENERGY MANAGEMENT**

### **C**

South Stradbroke Island has groundwater at the centre of the island, which has a maximum height of 3 metres above sea level. The water supply is recharged by rainfall and is commonly known as an unconfined freshwater aquifer (StK/1-) . Couran Cove Island Resort obtains its water supply by tapping into this aquifer and extracting it via a bore system. Some of the problems which have threatened the island's freshwater supply

include pollution, contamination and over-consumption. In order to minimise some of these problems, all laundry activities are carried out on the mainland. The resort considers washing machines as onerous to the island's freshwater supply, and that the detergents contain a high level of phosphates which are a major source of water pollution. The resort uses LPG-power generation rather than a diesel-powered plant for its energy supply, supplemented by wind turbine, which has reduced greenhouse emissions by 70% of diesel-equivalent generation methods. Excess heat recovered from the generator is used to heat the swimming pool. Hot water in the eco-cabins and for some of the resort's vehicles are solar-powered. Water efficient fittings are also installed in showers and toilets. However, not all the appliances used by the resort are energy efficient, such as refrigerators. Visitors who stay at the resort are encouraged to monitor their water and energy usage via the in-house television systems, and are rewarded with prizes (such as a free return trip to the resort) accordingly if their usage level is low.

## **CONCLUDING REMARKS**

### **D**

We examined a case study of good management practice and a pro-active sustainable tourism stance of an eco-resort. In three years of operation, Couran Cove Island Resort has won 23 international and national awards, including the 2001 Australian Tourism Award in the 4-Star Accommodation category. The resort has embraced and has effectively implemented contemporary environmental management practices. It has been argued that the successful implementation of the principles of sustainability should promote long-term social, economic and environmental benefits, while ensuring and enhancing the prospects of continued viability for the tourism enterprise. Couran Cove Island Resort does not conform to the characteristics of the Resort Development Spectrum, as proposed by Prideaux (2000). According to Prideaux, the resort should be at least at Phase 3 of the model (the National tourism phase), which describes an integrated resort providing 3-4 star hotel-type accommodation. The primary tourist market in Phase 3 of the model consists mainly of interstate visitors. However, the number of interstate and international tourists visiting the resort is small, with the principal locals and residents from nearby towns and the Gold Coast region. The carrying capacity

of Couran Cove does not seem to be of any concern to the Resort management. Given that it is a private commercial ecotourist enterprise, regulating the number of visitors to the resort to minimize damage done to the natural environment on South Stradbroke Island is not a binding constraint. However, the Resort's growth will eventually be constrained by its carrying capacity, and quantity control should be incorporated in the management strategy of the resort.

**Question 1 - 4.**

**Choose the correct letter, A, B, C or D. Write your answers in boxes 1 -4 on your answer sheet.**

1. the Stradbroke became two islands

A by an intended destruction of the ship of the Cambus Wallace

B by an explosion of dynamite on a ship and following nature erosion

C by the movement sandhills on Stradbroke Island

D by the volcanic eruption on island

2. Why are laundry activities for the resort carried out on the mainland.

A In order to obtain its water supply via a bore system

B In order to preserve the water and anti-pollution

C In order to save the cost of installing onerous washing machines

D In order to reduce the level of phosphates in water around

3. What is the major water supplier in South Stradbroke Island is by

A desalining the sea water

B collecting the rainfall

C transporting from the mainland

D boring ground water

4. What is applied for heating water on Couran Cove Island Resort

A the LPG-power

B a diesel-powered plant

C the wind power

D the solar-power

5. what does, as the managers of resorts believe, the prospective future focus on

A more awards of for resort's accommodation

B sustainable administration and development in a long run

C Economic and environmental benefits for the tourism enterprise

D successful implementation the Resort Development Spectrum

### Questions 6-10

***Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 6-10 on your answer sheet.***

Being located away from the mainland, tourists can attain the resort only by 6..... in a regular service. Within the resort, transports include trails for walking or tracks for both 7..... and the beach train. The on-island equipment is old-fashioned which is barely working such

as the 8..... overhead. There is television, radio, an old  
9..... and a small fridge. And you can buy the repellent for  
10..... if you forget to bring some.

### **Questions 11-13**

***Choose three correct letters among A-E***

***Write your answers in boxes 11-13 on your answer sheet.***

What is true as to the contemporary situation of Couran Cove Island Resort in the last paragraph?

- A. Couran Cove Island Resort goes for more eco-friendly practices
- B. the accommodation standard only conforms to the Resort Development Spectrum of Phase 3
- C. Couran Cove Island Resort should raise the accommodation build more standard and build more facilities
- D. the principal group visiting the resort is international tourists
- E. its carrying capacity will restrict the future business' expansion

## **SECTION 2**

***You should spend about 20 minutes on question 14-26, which are based on reading passage 2 on the following pages.***

### **TV Addiction**

**A** The amount of time people spend watching television is astonishing. On average, individuals in the industrialized world devote three hours a day to the pursuit —fully half

of their leisure time, and more than on any single activity save work and sleep. At this rate, someone who lives to 75 would spend nine years in front of the tube. To some commentators, this devotion means simply that people enjoy TV and make a conscious decision to watch it. But if that is the whole story, why do so many people experience misgivings about how much they view? In Gallup polls in 1992 and 1999, two out of five adult respondents and seven out of 10 teenagers said they spent too much time watching TV. Other surveys have consistently shown that roughly 10 percent of adults call themselves TV addicts

**B** To study people's reactions to TV, researchers have experiments in which they have monitored the brain waves (using an electroencephalograph, or EEG) to track behavior and emotion in the normal course of life, as opposed to the artificial conditions of the lab. Participants carried a beeper, and we signaled them six to eight times a day, at random, over the period of a week; whenever they heard the beep, they wrote down what they were doing and how they were feeling using a standardized scorecard.

**C** As one might expect, people who were watching TV when we beeped them reported feeling relaxed and passive. The EEG studies similarly show less mental stimulation, as measured by alpha brain-wave production, during viewing than during reading. What is more surprising is that the sense of relaxation ends when the set is turned off, but the feelings of passivity and lowered alertness continue. Survey participants say they have more difficulty concentrating after viewing than before. In contrast, they rarely indicate such difficulty after reading. After playing sports or engaging in hobbies, people report improvements in mood. After watching TV, people's moods are about the same or worse than before. That may be because viewers' vague learned sense that they will feel less relaxed if they stop viewing. So they tend not to turn the set off. Viewing begets more viewing which is the same as the experience of habit-forming drugs. Thus, the irony of TV: people watch a great deal longer than they plan to, even though prolonged viewing is less rewarding. In our ESM studies the longer people sat in front of the set, the less satisfaction they said they derived from it. For some, a twinge of unease or guilt that they aren't doing something more productive may also accompany and depreciate the enjoyment of prolonged viewing. Researchers in Japan, the U.K. and the U.S. have found

that this guilt occurs much more among middle-class viewers than among less affluent ones.

**D** What is it about TV that has such a hold on us? In part, the attraction seems to spring from our biological 'orienting response'. First described by Ivan Pavlov in 1927, the orienting response is our instinctive visual or auditory reaction to any sudden or novel stimulus. It is part of our evolutionary heritage, a built-in sensitivity to movement and potential predatory threats. In 1986 Byron Reeves of Stanford University, Esther Thorson of the University of Missouri and their colleagues began to study whether the simple formal features of television—cuts, edits, zooms, pans, sudden noises — activate the orienting response, thereby keeping attention on the screen. By watching how brain waves were affected by formal features, the researchers concluded that these stylistic tricks can indeed trigger involuntary responses and 'derive their attentional value through the evolutionary significance of detecting movement.... It is the form, not the content, of television that is unique.

**E** The natural attraction to television's sound and light starts very early in life. Dafna Lemish of Tel Aviv University has described babies at six to eight weeks attending to television. We have observed slightly older infants who, when lying on their backs on the floor, crane their necks around 180 degrees to catch what light through yonder window breaks. This inclination suggests how deeply rooted the orienting response is.

**F** The Experience Sampling Method permitted us to look closely at most every domain of everyday life: working, eating, reading, talking to friends, playing a sport, and so on. We found that heavy viewers report feeling significantly more anxious and less happy than light viewers do in unstructured situations, such as doing nothing, daydreaming or waiting in line. The difference widens when the viewer is alone. Subsequently, Robert D. McIlwraith of the University of Manitoba extensively studied those who called themselves TV addicts on surveys. On a measure called the Short Imaginal Processes Inventory (SIPI), he found that the self-described addicts are more easily bored and distracted and have poorer attentional control than the non-addicts. The addicts said they used TV to distract themselves from unpleasant thoughts and to fill time. Other studies over the years

have shown that heavy viewers are less likely to participate in community activities and sports and are more likely to be obese than moderate viewers or non-viewers.

**G** More than 25 years ago psychologist Tannis M. MacBeth Williams of the University of British Columbia studied a mountain community that had no television until cable finally arrived. Over time, both adults and children in the town became less creative in problem solving, less able to persevere at tasks, and less tolerant of unstructured time.

**H** Nearly 40 years ago Gary A. Steiner of the University of Chicago collected fascinating individual accounts of families whose set had broken. In experiments, families have volunteered or been paid to stop viewing, typically for a week or a month. Some fought, verbally and physically. In a review of these cold-turkey studies, Charles Winick of the City University of New York concluded: 'The first three or four days for most persons were the worst, even in many homes where viewing was minimal and where there were other ongoing activities. In over half of all the households, during these first few days of loss, the regular routines were disrupted, family members had difficulties in dealing with the newly available time, anxiety and aggressions were expressed. By the second week, a move toward adaptation to the situation was common.' Unfortunately, researchers have yet to flesh out these anecdotes; no one has systematically gathered statistics on the prevalence of these withdrawal symptoms.

**I** Even though TV does seem to meet the criteria for substance dependence, not all researchers would go so far as to call TV addictive. McIlwraith said in 1998 that 'displacement of other activities by television may be socially significant but still fall short of the clinical requirement of significant impairment.' He argued that a new category of 'TV addiction' may not be necessary if heavy viewing stems from conditions such as depression and social phobia. Nevertheless, whether or not we formally diagnose someone as TV-dependent, millions of people sense that they cannot readily control the amount of television they watch.



### Questions 14-18

Do the following statements agree with the claims of the writer in Reading Passage? In boxes 14-18 on your answer sheet, write

TRUE if the statement is true

FALSE if the statement is false

NOT GIVEN if the information is not given in the passage

14 Study shows that males are more likely to be addicted to TV than females.

15 Greater improvements in mood are experienced after watching TV than playing sports.

16 TV addiction works in similar ways as drugs.

17 It is reported that people's satisfaction is in proportion to the time they spend watching TV.

18 Middle-class viewers are more likely to feel guilty about watching TV than the poor.

### Questions 19-23

Look at the following researchers (Questions 19-23) and the list of statements below.

Match each researcher with the correct statements.

Write the correct letter A-H in boxes 19-23 on your answer sheets.

19 Byron Reeves and Esther Thorson

20 Dafna Lemish

21 Robert D. McIlwraith

22 Tannis M. MacBeth Williams

**List of Statements**

A Audiences would get hypnotized from viewing too much television.

B People have been sensitive to the TV signals since a younger age.

C People are less likely to accomplish their work with television.

D A handful of studies have attempted to study other types of media addiction.

E The addictive power of television could probably minimize the problems.

F Various media formal characters stimulate people's reaction on the screen.

G People who believe themselves to be TV addicts are less likely to join in the group activities.

H It is hard for people to accept the life without TV at the beginning.

**Questions 24-26**

Choose the correct letter, A, B, C or D.

Write the correct letter in boxes 24-26 on your answer sheet.

24 People in the industrialized world

A devote ten hours watching TV on average.

B spend more time on TV than other entertainment.

C call themselves TV addicts.

D working best.

25 When compared with light viewers, heavy viewers

A like playing sport more than reading.

B feel relaxed after watching TV.

C spend more time in daydreaming.

D are more easily bored while waiting in line.

26 Which of the following statements is true about the family experiment?

A Not all the subjects participate in the experiment for free.

B There has been a complete gathered data.

C People are prevented from other activities during the experiment.

D People cannot adapt to the situation until the end

## SECTION 3

### Music: Language We All Speak

**Section A:** Music is one of the human specie's relatively few universal abilities. Without formal training, any individual, from Stone Age tribesman to suburban teenager has the ability to recognize music and, in some fashion, to make it. Why this should be so is a mystery. After all, music isn't necessary for getting through the day, and if it aids in reproduction, it does so only in highly indirect ways. Language, by contrast, is also everywhere- but for reasons that are more obvious. With language, you and the members of your tribe can organize a migration across Africa, build reed boats and cross the seas, and communicate at night even when you can't see each other. Modern culture, in all its technological extravagance, springs directly from the human talent for manipulating

symbols and syntax. Scientists have always been intrigued by the connection between music and language. Yet over the years, words and melody have acquired a vastly different status in the lab and the seminar room. While language has long been considered essential to unlocking the mechanisms of human intelligence, music is generally treated as an evolutionary frippery-mere "auditory cheesecake," as the Harvard cognitive scientist Steven Pinker puts it.

**Section B:** But thanks to a decade-long wave of neuroscience research, that tune is changing. A flurry of recent publications suggests that language and music may equally be able to tell us who we are and where we're from - not just emotionally, but biologically. In July, the journal *Nature Neuroscience* devoted a special issue to the topic. And in an article in the August 6 issue of the *Journal of Neuroscience*, David Schwartz, Catherine Howe, and Dale Purves of Duke University argued that the sounds of music and the sounds of language are intricately connected. To grasp the originality of this idea, it's necessary to realize two things about how music has traditionally been understood. First, musicologists have long emphasized that while each culture stamps a special identity onto its music; music itself has some universal qualities. For example, in virtually all cultures sound is divided into some or all of the 12 intervals that make up the chromatic scale - that is, the scale represented by the keys on a piano. For centuries, observers have attributed this preference for certain combinations of tones to the mathematical properties of sound itself. Some 2,500 years ago, Pythagoras was the first to note a direct relationship between the harmoniousness of a tone combination and the physical dimensions of the object that produced it. For example, a plucked string will always play an octave lower than a similar string half its size, and a fifth lower than a similar string two-thirds its length. This link between simple ratios and harmony has influenced music theory ever since.

**Section C:** This music-is-moth idea is often accompanied by the notion that music formally speaking at least, exists apart from the world in which it was created. Writing recently in *The New York Review of Books*, pianist and critic Charles Rosen discussed the long-standing notion that while painting and sculpture reproduce at least some aspects of the natural world, and writing describes thoughts and feelings we are all

familiar with, music is entirely abstracted from the world in which we live. Neither idea is right, according to David Schwartz and his colleagues. Human musical preferences are fundamentally shaped not by elegant algorithms or ratios but by the messy sounds of real life, and of speech in particular -which in turn is shaped by our evolutionary heritage." The explanation of music, like the explanation of any product of the mind, must be rooted in biology, not in numbers per se," says Schwartz.

Schwartz, Howe, and Purves analyzed a vast selection of speech sounds from a variety of languages to reveal the underlying patterns common to all utterances. In order to focus only on the raw sound, they discarded all theories about speech and meaning and sliced sentences into random bites. Using a database of over 100,000 brief segments of speech, they noted which frequency had the greatest emphasis in each sound. The resulting set of frequencies, they discovered, corresponded closely to the chromatic scale. In short, the building blocks of music are to be found in speech

Far from being abstract, music presents a strange analog to the patterns created by the sounds of speech. "Music, like the visual arts, is rooted in our experience of the natural world," says Schwartz. "It emulates our sound environment in the way that visual arts emulate the visual environment. " In music we hear the echo of our basic sound-making instrument- the vocal tract. The explanation for human music is simple; still than Pythagoras's mathematical equations. We like the sounds that are familiar to us- specifically, we like sounds that remind us of us.

This brings up some chicken-or-egg evolutionary questions. It may be that music imitates speech directly, the researchers say, in which case it would seem that language evolved first. It's also conceivable that music came first and language is in effect an Imitation of song - that in everyday speech we hit the musical notes we especially like. Alternately, it may be that music imitates the general products of the human sound-making system, which just happens to be mostly speech. "We can't know this," says Schwartz. "What we do know is that they both come from the same system, and it is this that shapes our preferences."

**Section D:** Schwartz's study also casts light on the long-running question of whether animals understand or appreciate music. Despite the apparent abundance of "music" in the natural world- birdsong, whalesong, wolf howls, synchronized chimpanzee hooting previous studies have found that many laboratory animals don't show a great affinity for the human variety of music making. Marc Hauser and Josh McDermott of Harvard argued in the July issue of *Nature Neuroscience* that animals don't create or perceive music the way we do. The act that laboratory monkeys can show recognition of human tunes is evidence, they say, of shared general features of the auditory system, not any specific chimpanzee musical ability. As for birds, those most musical beasts, they generally recognize their own tunes - a narrow repertoire - but don't generate novel melodies like we do. There are no avian Mozarts.

But what's been played to the animals, Schwartz notes, is human music. If animals evolve preferences for sound as we do - based upon the soundscape in which they live - then their "music" would be fundamentally different from ours. In the same way our scales derive from human utterances, a cat's idea of a good tune would derive from yowls and meows. To demonstrate that animals don't appreciate sounds the way we do, we'd need evidence that they don't respond to "music" constructed from their own sound environment.

**Section E:** No matter how the connection between language and music is parsed, what is apparent is that our sense of music, even our love for it, is as deeply rooted in our biology and in our brains as language is. This is most obvious with babies, says Sandra Trehub at the University of Toronto, who also published a paper in the *Nature Neuroscience* special issue.

For babies, music and speech are on a continuum. Mothers use musical speech to "regulate infants' emotional states," Trehub says. Regardless of what language they speak, the voice all mothers use with babies is the same: "something between speech and song." This kind of communication "puts the baby in a trance-like state, which may proceed to sleep or extended periods of rapture." So if the babies of the world could understand the latest research on language and music, they probably wouldn't be very

surprised. The upshot, says Trehub, is that music may be even more of a necessity than we realize.

### **Question 27 - 31**

Reading Passage 3 has five sections A-E.

Choose the correct heading for each section from the list of headings below.

Write the correct number i-viii in boxes 27-31 on your answer sheet.

### **List of Headings**

- i. Animal sometimes make music.
- ii. Recent research on music
- iii. Culture embedded in music
- iv. Historical theories review
- v. Communication in music with animals
- vi. Contrast between music and language
- vii. Questions on a biological link with human and music
- viii. Music is good for babies.

27 Section A

28 Section B

29 Section C

30 Section D

31 Section E

**Questions 32-38**

Look at the following people and list of statements below.

Match each person with the correct statement.

Write the correct letter A-G in boxes 32-38 on your answer sheet.

**List of statements**

A Music exists outside of the world in which it is created

B Music has a common feature though cultural influences affect

C Humans need music

D Music priority connects to the disordered sound around

E Discovery of mathematical musical foundation

F Music is not treat equally well compared with language

G Humans and monkeys have similar traits in perceiving sound

32. Steven Pinker

33. Musicologists

34. Greek philosopher Pythagoras

35. Schwartz, Howe, and Purves

36. Marc Hauser and Josh McDermott

37. Charles Rosen



38. Sandra Trehub

**Questions 39-40**

Choose the correct letter A, B, C or D

Write your answers in boxes 39-40 on your answer sheet.

39 Why was the study of animal's music uncertain?

A Animals don't have the same auditory system as humans.

B Experiments on animal's music are limited.

C tunes are impossible for animal to make up.

D Animals don't have spontaneous ability for the tests.

40 What is the main subject of this passage?

A Language and psychology.

B Music formation.

C Role of music in human society.

D Music experiments for animals.

# Reading Test 7

## SECTION 1

### California's age of Megafires

**A** There's a reason fire squads now battling more than a dozen blazes in southern California are having such difficulty containing the flames, despite better preparedness than ever and decades of experience fighting fires fanned by the notorious Santa Ana winds. The wildfires themselves, experts say, generally are hotter, move faster, and spread more erratically than in the past.

**B** The short-term explanation is that the region, which usually has dry summers, has had nine inches less rain than normal this year. Longer term, climate change across the West is leading to hotter days on average and longer fire seasons. Experts say this is likely to yield more megafires like the conflagrations that this week forced evacuations of at least 300,000 resident in California's southland and led President Bush to declare a disaster emergency in seven counties on Tuesday.

**C** Megafires, also called "siege fires," are the increasingly frequent blazes that burn 500,000 acres or more - 10 times the size of the average forest fire of 20 years ago. One of the current wildfires is the sixth biggest in California ever, in terms of acreage burned, according to state figures and news reports. The trend to more superhot fires, experts say, has been driven by a century-long policy of the US Forest Service to stop wildfires as quickly as possible. The unintentional consequence was to halt the natural eradication of underbrush, now the primary fuel for megafires. Three other factors contribute to the trend, they add. First is climate change marked by a 1 -degree F. rise in average yearly temperature across the West. Second is a fire season that on average is 78 days longer than in the late 1980s. Third is increased building of homes and other structures in wooded areas.

**D** "We are increasingly building our homes ... in fire-prone ecosystems," says Dominik Kulakowski, adjunct professor of biology at Clark University Graduate School of

Geography in Worcester, Mass. Doing that "in many of the forests of the Western US ... is like building homes on the side of an active volcano." In California, where population growth has averaged more than 600,000 a year for at least a decade, housing has pushed into such areas. "What once was open space is now residential homes providing fuel to make fires burn with greater intensity," says Terry McHale of the California Department of Forestry firefighters union. "With so much dryness, so many communities to catch fire, so many fronts to fight, it becomes an almost incredible job."

**E** That said, many experts give California high marks for making progress on preparedness since 2003, when the largest fires in state history scorched 750,000 acres, burned 3,640 homes, and killed 22 people. Stung then by criticism of bungling that allowed fires to spread when they might have been contained, personnel are meeting the peculiar challenges of neighborhood- and canyon-hopping fires better than in recent years, observers say.

**F** State promises to provide newer engines, planes, and helicopters have been fulfilled. Firefighters unions that then complained of dilapidated equipment, old fire engines, and insufficient blueprints for fire safety are now praising the state's commitment, noting that funding for firefighting has increased despite huge cuts in many other programs. "We are pleased that the Schwarzenegger administration has been very proactive in its support of us and come through with budgetary support of the infrastructure needs we have long sought," says Mr. McHale with the firefighters union.

**G** Besides providing money to upgrade the fire engines that must traverse the mammoth state and wind along serpentine canyon roads, the state has invested in better command-and-control facilities as well as the strategies to run them. "In the fire sieges of earlier years, we found out that we had the willingness of mutual-aid help from other jurisdictions and states, but we were not able to communicate adequately with them," says Kim Zagaris, chief of the state's Office of Emergency Services, fire and rescue branch. After a 2004 blue-ribbon commission examined and revamped those procedures, the statewide response "has become far more professional and responsive," he says.

**H** Besides ordering the California National Guard on Monday to make 1,500 guardsmen available for firefighting efforts, Gov. Arnold Schwarzenegger asked the Pentagon to send all available Modular Airborne Fighting Systems to the area. The military Lockheed C-130 cargo/utility aircraft carry a pressurized 3,000-gallon tank that can eject fire retardant or water in fewer than five seconds through two tubes at the rear of the plane. This load can cover an area 1/4- mile long and 60 feet wide to create a fire barrier. Governor Schwarzenegger also directed 2,300 inmate firefighters and 170 custody staff from the California Department of Corrections and Rehabilitation to work hand in hand with state and local firefighters.

**I** Residents and government officials alike are noting the improvements with gratitude, even amid the loss of homes, churches, businesses, and farms. By Tuesday morning, the fires had burned 1,200 homes and businesses and set 245,957 acres — 384 square miles — ablaze. Despite such losses, there is a sense that the speed, dedication, and coordination of firefighters from several states and jurisdictions are resulting in greater efficiency than in past "siege fire" situations.

**J** "I am extraordinarily impressed by the improvements we have witnessed between the last big fire and this," says Ross Simmons, a San Diego-based lawyer who had to evacuate both his home and business on Monday, taking up residence at a Hampton Inn 30 miles south of his home in Rancho Bernardo. After fires consumed 172,000 acres there in 2003, the San Diego region turned communitywide soul-searching into improved building codes, evacuation procedures, and procurement of new technology. Mr. Simmons and neighbors began receiving automated phone calls at 3:30 a.m. Monday morning telling them to evacuate. "Notwithstanding all the damage that will be caused by this, we will not come close to the loss of life because of what we have ... put in place since then," he says.

### Questions 1-6

Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 1-6 on your answer sheet.

Experts point out that blazes in California are having more heat, faster speed and they \_\_\_\_\_ 1 \_\_\_\_\_ more unpredictably compared with former ones. One explanation is that California's summer is dry, \_\_\_\_\_ 2 \_\_\_\_\_ is below the average point. Another long term explanation is that hotter and longer potential days occur due to \_\_\_\_\_ 3 \_\_\_\_\_. Nowadays, Megafires burn \_\_\_\_\_ 4 \_\_\_\_\_ the size of forest area caused by an ordinary fire of 20 years ago. The serious trend is mainly caused by well-grown underbrush, which provides \_\_\_\_\_ 5 \_\_\_\_\_ for the siege fires. Other contributors are climate change and extended \_\_\_\_\_ 6 \_\_\_\_\_.

### Questions 7-9

Choose the correct letter, **A**, **B**, **C** or **D**.

Write your answers in boxes 7-9 on your answer sheet.

7. What is expert's attitude towards California's performance after 2003 megafire?

A They could have done better

B Blamed them on casualties

C Improvement made on preparation

D Serious criticism

8. According to Governor Schwarzenegger, which one is CORRECT about his effort for firefighting?

A Schwarzenegger requested successfully for military weapons

B Schwarzenegger led many prison management staff to work together with local fire fighters

C Schwarzenegger acted negatively in recent megafire in California

D Schwarzenegger ordered 1,500 office clerks to join firefighting scene.

9. What happened to Ross Simmon on the day of megafire break out?

A He was sleeping till morning

B He was doing business at Hampton Inn

C He suffered employee death on that morning

D He was alarmed by machine calls

### Questions 10-13

Do the following statements agree with the information given in Reading Passage 1? In boxes 10-13 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

10. The area of open space in California has declined during the past decade.

11. Fire squad wants to recruit more firefighters this year.

12. Firefighters union declared that firefighters have had more improved and supportive facility by the local government.

13. Before the year of 2004, well coordination and communication between California and other states already existed in fire siege.

## SECTION 2

### European Heat Wave

**A** It was the summer, scientists now realise, when felt. We knew that summer 2003 was remarkable: global warming at last made itself unmistakably Britain experienced its record high temperature and continental Europe saw forest fires raging out of control, great rivers drying of a trickle and thousands of heat-related deaths. But just how remarkable is only now becoming clear

**B** The three months of June, July and August were the warmest ever recorded in western and central Europe, with record national highs in Portugal, Germany and Switzerland as well as Britain. And they were the warmest by a very long way Over a great rectangular block of the earth stretching from west of Paris to northern Italy, taking in Switzerland and southern Germany, the average temperature for the summer months was 3.78°C above the long-term norm, said the Climatic Research Unit (CRU) of the University of East Anglia in Norwich, which is one of the world's leading institutions for the monitoring and analysis of temperature records.

**C** That excess might not seem a lot until you are aware of the context - but then you realise it is enormous. There is nothing like this in previous data, anywhere. It is considered so exceptional that Professor Phil Jones, the CRU's director, is prepared to say openly - in a way few scientists have done before - that the 2003 extreme may be directly attributed, not to natural climate variability, but to global warming caused by human actions.

**D** Meteorologists have hitherto contented themselves with the formula that recent high temperatures are consistent with predictions" of climate change. For the great block of the map — that stretching between 3 5-5 ON and 0-20E - the CRU has reliable temperature records dating back to 1781. Using as a baseline the average summer temperature recorded between 1961 and 1990, departures from the temperature norm, or "anomalies": over the area as a whole can easily be plotted. As the graph shows, such is the variability of our climate that over the past 200 years, there have been at least half a

dozen anomalies, in terms of excess temperature - the peaks on the graph denoting very hot years - approaching, or even exceeding, 20 °C. But there has been nothing remotely like 2003, when the anomaly is nearly four degrees.

**E** "This is quite remarkable," Professor Jones told The Independent. "It's very unusual in a statistical sense. If this series had a normal statistical distribution, you wouldn't get this number. There turn period "how often it could be expected to recur" would be something like one in a thou-sand years. If we look at an excess above the average of nearly four degrees, then perhaps nearly three degrees of that is natural variability, because we've seen that in past summers. But the final degree of it is likely to be due to global warming, caused by human actions.

**F** The summer of 2003 has, in a sense, been one that climate scientists have long been expecting. Until now, the warming has been manifesting itself mainly in winters that have been less cold than in summers that have been much hotter. Last week, the United Nations predicted that winters were warming so quickly that winter sports would die out in Europe's lower-level ski resorts. But sooner or later the unprecedented hot summer was bound to come, and this year it did.

**G** One of the most dramatic features of the summer was the hot nights, especially in the first half of August. In Paris, the temperature never dropped below 23.0°C (73.4°F) at all between 7 and 14 August, and the city recorded its warmest-ever night on 11-12 August, when the mercury did not drop below 25.5°C (77.9°F). Germany recorded its warmest-ever night at Weinbiet in the Rhine valley with a lowest figure of 27.6°C (80.6°F) on 13 August, and similar record-breaking night-time temperatures were recorded in Switzerland and Italy.

**H** The 15,000 excess deaths in France during August, compared with previous years, have been related to the high night-time temperatures. The number gradually increased during the first 12 days of the month, peaking at about 2,000 per day on the night of 12-13 August, then fell off dramatically after 14 August when the minimum temperatures fell



by about 50C. The elderly were most affected, with a 70 per cent increase in mortality rate in those aged 75-94.

I For Britain, the year as a whole is likely to be the warmest ever recorded, but despite the high temperature record on 10 August, the summer itself - defined as the June, July and August period - still comes behind 1976 and 1995, when there were longer periods of intense heat. At the moment, the year is on course to be the third-hottest ever in the global temperature record, which goes back to 1856, behind 1998 and 2002 but when all the records for October, November and December are collated, it might move into second place, Professor Jones said. The 10 hottest years in the record have all now occurred since 1990. Professor Jones is in no doubt about the astonishing nature of European summer of 2003. "The temperatures recorded were out of all proportion to the previous record," he said. "It was the warmest summer in the past 500 years and probably way beyond that It was enormously exceptional."

J His colleagues at the University of East Anglia's Tyndall Centre for Climate Change Research are now planning a special study of it. "It was a summer that has not: been experienced before, either in terms of the temperature extremes that were reached, or the range and diversity of the impacts of the extreme heat," said the centre's executive director, Professor Mike Hulme. "It will certainly have left its mark on a number of countries, as to how they think and plan for climate change in the future, much as the 2000 floods have revolutionised the way the Government is thinking about flooding in the UK. "The 2003 heat wave will have similar repercussions across Europe."

### Questions 14-19

Do the following statements agree with the information given in Reading Passage 2? In boxes 14-19 on your answer sheet, write

*TRUE if the statement is true*

*FALSE if the statement is false*

*NOT GIVEN if the information is not given in the passage*

14. The average summer temperature in 2003 is approximately four degrees higher than that of the past.

15. Jones believes the temperature statistic is within the normal range.

16. Human factor is one of the reasons that caused hot summer.

17. In large city, people usually measure temperature twice a day.

18. Global warming has obvious effect of warmer winter instead of hotter summer before 2003.

19. New ski resorts are to be built on a high-altitude spot.

### **Questions 20-21**

Answer the questions below using NO MORE THAN THREE WORDS AND/OR NUMBERS from the passage for each answer. Write your answers in boxes 20-21 on your answer sheet

20. What are the two hottest years in Britain besides 2003?

21. What will affect UK government policies besides climate change according to Hulme?

### **Questions 22-26**

Complete the summary below using NO MORE THAN THREE WORDS AND/OR NUMBERS from the passage. Write your answers in boxes 22-26 On your answer sheet

In the summer of 2003, thousands of extra death occurred in the country of \_\_\_\_\_  
22\_\_\_\_\_. Moreover, world-widely, the third record of hottest summer date from  
\_\_\_\_\_ 23\_\_\_\_\_, after the year of \_\_\_\_\_ 24\_\_\_\_\_. According to  
Jones, all the 10 hottest years happened from \_\_\_\_\_ 25\_\_\_\_\_. However,  
summer of 2003 was at the peak of previous \_\_\_\_\_ 26\_\_\_\_\_ years, perhaps  
even more.

### Question 27

Choose the correct letter A, B, C or D

Write your answer in box 27 on your answer sheet

27. Which one can be best served as the title of this passage in the following options?

- A Global Warming effect
- B Global Warming in Europe
- C The Effects of hot temperature
- D Hottest summer in Europe

## SECTION 3

### The concept of childhood in the western countries

The history of childhood has been a topic of interest in social history since the highly influential 1960 book *Centuries of Childhood*, written by French historian Philippe Aries. He argued that "childhood" is a concept created by modern society.

**A** One of the most hotly debated issues in the history of childhood has been whether childhood is itself a recent invention. The historian Philippe Aries argued that in Western Europe during the Middle Ages (up to about the end of the fifteenth century) children were regarded as miniature adults, with all the intellect and personality that this implies. He scrutinized medieval pictures and diaries, and found no distinction between children and adults as they shared similar leisure activities and often the same type of work. Aries, however, pointed out that this is not to suggest that children were neglected, forsaken or despised. The idea of childhood is not to be confused with affection for children; it

corresponds to an awareness of the particular nature of childhood, that particular nature which distinguishes the child from the adult, even the young adult.

**B** There is a long tradition of the children of the poor playing a functional role in contributing to the family income by working either inside or outside the home. In this sense children are seen as 'useful'. Back in the Middle Ages, children as young as 5 or 6 did important chores for their parents and, from the sixteenth century, were often encouraged (or forced) to leave the family by the age of 9 or 10 to work as servants for wealthier families or to be apprenticed to a trade.

**C** With industrialization in the eighteenth and nineteenth centuries, a new demand for child labour was created, and many children were forced to work for long hours, in mines, workshops and factories. Social reformers began to question whether labouring long hours from an early age would harm children's growing bodies. They began to recognize the potential of carrying out systematic studies to monitor how far these early deprivations might be affecting children's development.

**D** Gradually, the concerns of the reformers began to impact on the working conditions of children. In Britain, the Factory Act of 1833 signified the beginning of legal protection of children from exploitation and was linked to the rise of schools for factory children. The worst forms of child exploitation were gradually eliminated, partly through factory reform but also through the influence of trade unions and economic changes during the nineteenth century which made some forms of child labour redundant. Childhood was increasingly seen as a time for play and education for all children, not just for a privileged minority. Initiating children into work as 'useful' children became less of a priority. As the age for starting full-time work was delayed, so childhood was increasingly understood as a more extended phase of dependency, development and learning. Even so, work continued to play a significant, if less central role in children's lives throughout the later nineteenth and twentieth century. And the 'useful child', has become a controversial image during the first decade of the twenty-first century especially in the context of global concern about large numbers of the world's children engaged in child labour .

**E** The Factory Act of 1833 established half-time schools which allowed children to work and attend school. But in the 1840s, a large proportion of children never went to school, and if they did, they left by the age of 10 or 11. The situation was very different by the end of the nineteenth century in Britain. The school became central to images of<sup>7</sup> a normal childhood.

**F** Attending school was no longer a privilege and all children were expected to spend a significant part of their day in a classroom. By going to school, children's lives were now separated from domestic life at home and from the adult world of work. School became an institution dedicated to shaping the minds, behaviour and morals of the young. Education dominated the management of children's waking hours, not just through the hours spent in classrooms but through 'home' work, the growth of after school<sup>7</sup> activities and the importance attached to 'parental involvement'.

**G** Industrialization, urbanization and mass schooling also set new challenges for those responsible for protecting children's welfare, and promoting their learning. Increasingly, children were being treated as a group with distinctive needs and they were organized into groups according to their age. For example, teachers needed to know what to expect of children in their classrooms, what kinds of instruction were appropriate for different age groups and how best to assess children's progress. They also wanted tools that could enable them to sort and select children according to their abilities and potential.

### Questions 28-34

Do the following statements agree with the information given in Reading Passage 3? Write your answers in boxes 28-34 on your answer sheet.

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

28. Aries pointed out that children did different types of work as adults during the Middle Age.

29. During the Middle Age, going to work necessarily means children were unloved indicated by Aries.

30. Scientists think that overworked labour damages the health of young children

31. the rise of trade union majorly contributed to the protection children from exploitation in 19<sup>th</sup> century

32. By the aid of half-time schools, most children went to school in the mid of 19 century.

33. In 20 century almost all children need to go to school in full time schedule.

34. Nowadays, children's needs were much differentiated and categorised based on how old they are

### **Questions 35-40**

Answer the questions below.

Choose NO MORE THAN THREE WORDS from the passage for each answer.

Write your answers in boxes 35-40 on your answer sheet.

35. what is the controversial topic arises with the French historian Philippe Aries's concept

36. what image for children did Aries believed to be like in Western Europe during the Middle Ages

37. what historical event generated the need for great amount child labour to work long time in 18 and 19 century

38. what legal format initiated the protection of children from exploitation in 19<sup>th</sup> century

39. what the activities were more and more regarded as being preferable for almost all children time in 19<sup>th</sup> century

40. where has been the central area for children to spend largely of their day as people's expectation in modern society

# Reading Test 8

## SECTION 1

You should spend about 20 minutes on Questions 1-13, which are based on Reading Passage 1 on the following pages

### Natural Pesticide in India

**A** A dramatic story about cotton farmers in India shows how destructive pesticides can be for people and the environment; and why today's agriculture is so dependent on pesticides. This story also shows that it's possible to stop using chemical pesticides without losing a crop to ravaging insects, and it explains how to do it.

**B** The story began about 30 years ago, a handful of families migrated from the Guntur district of Andhra Pradesh, southeast India, into Punukula, a community of around 900 people farming plots of between two and 10 acres. The outsiders from Guntur brought cotton-culture with them. Cotton wooed farmers by promising to bring in more hard cash than the mixed crops they were already growing to eat and sell: millet, sorghum, groundnuts, pigeon peas, mung beans, chilli and rice. But raising cotton meant using pesticides and fertilisers - until then a mystery to the mostly illiterate farmers of the community. When cotton production started spreading through Andhra Pradesh state. The high value of cotton made it an exceptionally attractive crop, but growing cotton required chemical fertilizers and pesticides. As most of the farmers were poor, illiterate, and without previous experience using agricultural chemicals, they were forced to rely on local, small-scale agricultural dealers for advice. The dealers sold them seeds, fertilizers, and pesticides on credit and also guaranteed purchase of their crop. The dealers themselves had little technical knowledge about pesticides. They merely passed on promotional information from multinational chemical companies that supplied their products.



**C** At first, cotton yields were high, and expenses for pesticides were low because cotton pests had not yet moved in. The farmers had never earned so much! But within a few years, cotton pests like bollworms and aphids plagued the fields, and the farmers saw how rapid insect evolution can be. Repeated spraying killed off the weaker pests, but left the ones most resistant to pesticides to multiply. As pesticide resistance mounted, the farmers had to apply more and more of the pesticides to get the same results. At the same time, the pesticides killed off birds, wasps, beetles, spiders, and other predators that had once provided natural control of pest insects. Without these predators, the pests could destroy the entire crop if pesticides were not used. Eventually, farmers were mixing pesticide "cocktails" containing as many as ten different brands and sometimes having to spray their cotton as frequently as two times a week. They were really hooked!

**D** The villagers were hesitant, but one of Punukula's village elders decided to risk trying the natural methods instead of pesticides. His son had collapsed with acute pesticide poisoning and survived but the hospital bill was staggering. SECURE's staff coached this villager on how to protect his cotton crop by using a toolkit of natural methods that India's Center for Sustainable Agriculture put together in collaboration with scientists at Andhra Pradesh's state university. They called the toolkit "Non-Pesticide Management" — or "NPM."

**E** The most important resource in the NPM toolkit was the neem tree (*Azadirachta indica*) which is common throughout much of India. Neem tree is a broad-leaved evergreen tree related to mahogany. It protects itself against insects by producing a multitude of natural pesticides that work in a variety of ways: with an arsenal of chemical defenses that repel egg-laying, interfere with insect growth, and most important, disrupt the ability of crop-eating insects to sense their food.

**F** In fact, neem has been used traditionally in India to protect stored grains from insects and to produce soaps, skin lotions, and other health products. To protect crops from insects, neem seeds are simply ground into a powder that is soaked overnight in water. The solution is then sprayed onto the crop. Another preparation, neem cake, can be mixed into the soil to kill pests and diseases in the soil, and it doubles as an organic fertiliser

high in nitrogen. Neem trees grow locally, so the only "cost" is the labor to prepare neem for application to fields.

**G** The first farmer's trial with NPM was a complete success! His harvest was as good as the harvests of farmers that were using pesticides, and he earned much more because he did not spend a single rupee on pesticides. Inspired by this success, 20 farmers tried NPM the next year. SECURE posted two well-trained staff in Punukula to teach and help everyone in the village, and the village women put pressure on their husbands to stop using toxic chemicals. Families that were no longer exposing themselves to pesticides began to feel much better, and the rapid improvements in income, health, and general wellbeing quickly sold everyone on the value of NPM. By 2000, all the farmers in Punukula were using NPM, not only for cotton, but for their other crops as well.

**H** The suicide epidemic came to an end. And with the cash, health, and energy that returned when they stopped poisoning themselves with pesticides, the villagers were inspired to start more community and business projects. The women of Punukula created a new source of income by collecting, grinding, and selling neem seeds for NPM in other villages. The villagers rescued their indentured children and gave them special six-month "catch-up" courses to return to school.

**I** Fighting against pesticides, and winning, increased village solidarity, self-confidence, and optimism about the future. When dealers tried to punish NPM users by paying less for NPM cotton, the farmers united to form a marketing cooperative that found fairer prices elsewhere. The leadership and collaboration skills that the citizens of Punukula developed in the NPM struggle have helped them to take on other challenges, like water purification, building a cotton gin to add value to the cotton before they sell it, and convincing the state government to support NPM over the objection of multi-national pesticide corporations.

### **Questions 1-4**

Do the following statements agree with the information given in Reading Passage 1? In boxes 1-4 on your answer sheet, write

**TRUE**            *if the statement is true*

**FALSE**           *if the statement is false*

**NOT GIVEN**   *if the information is not given in the passage*

1. Cotton in Andhra Pradesh state could really bring more income to the local farmers than traditional farming.
2. The majority of farmers had used the agricultural pesticides before 30 years ago.
3. The yield of cotton is relatively lower than that of other agricultural crops.
4. The farmers didn't realize the spread of the pests was so fast.

### Questions 5-11

Complete the summary below.

Choose NO MORE THAN TWO WORDS from the passage for each answer, Write your answers in boxes 5-10 on your answer sheet.

#### The Making of pesticide protecting crops against insects

The broad-leaved neem tree was chosen, it is a fast-growing and 5\_\_\_\_\_ tree and produces amount of 6\_\_\_\_\_ for itself that can be effective like insects repellent. Firstly, neem seeds need to be crushed into 7\_\_\_\_\_ form, which is left behind 8\_\_\_\_\_ in water. Then we need to spray the solution onto the crop. A special 9\_\_\_\_\_ is used when mix with soil in order to eliminate bugs and bacteria, and its effect 10\_\_\_\_\_ when it adds the level of 11\_\_\_\_\_ in this organic fertilizer meanwhile.

### Questions 12-14

Answer the questions below.

Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer. Write your answers in boxes 12-14 on your answer sheet.

12. In which year did all the farmers use NPM for their crops in Punukula?

13. What gave the women of Punukula a business opportunity to NPMs?

14. Name one project that the citizens of Punukula decide to develop in the NPM.

## **SECTION 2**

**You should spend about 20 minutes on Questions 15 - 27, which are based on Reading Passage 2 below.**

### **Numeracy: Can animals tell numbers?**

**A**

Prime among basic numerical faculties is the ability to distinguish between a larger and a smaller number, says psychologist Elizabeth Brannon. Humans can do this with ease - providing the ratio is big enough - but do other animals share this ability? In one experiment, rhesus monkeys and university students examined two sets of geometrical objects that appeared briefly on a computer monitor. They had to decide which set contained more objects. Both groups performed successfully but, importantly, Brannon's team found that monkeys, like humans, make more errors when two sets of objects are close in number. The students' performance ends up looking just like a monkey's. It's practically identical, 'she says.

**B**

Humans and monkeys are mammals, in the animal family known as primates. These are not the only animals whose numerical capacities rely on ratio, however. The same seems to apply to some amphibians. Psychologist Claudia Uller's team tempted salamanders with two sets of fruit flies held in clear tubes. In a series of trials, the researchers noted

which tube the salamanders scampered towards, reasoning that if they had a capacity to recognise number, they would head for the larger number. The salamanders successfully discriminated between tubes containing 8 and 16 flies respectively, but not between 3 and 4, 4 and 6, or 8 and 12. So it seems that for the salamanders to discriminate between two numbers, the larger must be at least twice as big as the smaller. However, they could differentiate between 2 and 3 flies just as well as between 1 and 2 flies, suggesting they recognise small numbers in a different way from larger numbers.

## C

Further support for this theory comes from studies of mosquitofish, which instinctively join the biggest shoal they can. A team at the University of Padova found that while mosquitofish can tell the difference between a group containing 3 shoal-mates and a group containing 4, they did not show a preference between groups of 4 and 5. The team also found that mosquitofish can discriminate between numbers up to 16, but only if the ratio between the fish in each shoal was greater than 2:1. This indicates that the fish, like salamanders, possess both the approximate and precise number systems found in more intelligent animals such as infant humans and other primates.

## D

While these findings are highly suggestive, some critics argue that the animals might be relying on other factors to complete the tasks, without considering the number itself. 'Any study that's claiming an animal is capable of representing number should also be controlling for other factors,' says Brannon. Experiments have confirmed that primates can indeed perform numerical feats without extra clues, but what about the more primitive animals?

## E

To consider this possibility, the mosquito fish tests were repeated, this time using varying geometrical shapes in place of fish. The team arranged these shapes so that they had the same overall surface area and luminance even though they contained a different number of objects. Across hundreds of trials on 14 different fish, the team found they

consistently discriminated 2 objects from 3. The team is now testing whether mosquitofish can also distinguish 3 geometric objects from 4.

## F

Even more primitive organisms may share this ability. Entomologist Jurgen Tautz sent a group of bees down a corridor, at the end of which lay two chambers - one which contained sugar water, which they like, while the other was empty. To test the bees' numeracy, the team marked each chamber with a different number of geometrical shapes - between 2 and 6. The bees quickly learned to match the number of shapes with the correct chamber. Like the salamanders and fish, there was a limit to the bees' mathematical prowess - they could differentiate up to 4 shapes, but failed with 5 or 6 shapes.

## G

These studies still do not show whether animals learn to count through training, or whether they are born with the skills already intact. If the latter is true, it would suggest there was a strong evolutionary advantage to a mathematical mind. Proof that this may be the case has emerged from an experiment testing the mathematical ability of three- and four-day-old chicks. Like mosquitofish, chicks prefer to be around as many of their siblings as possible, so they will always head towards a larger number of their kin. If chicks spend their first few days surrounded by certain objects, they become attached to these objects as if they were family. Researchers placed each chick in the middle of a platform and showed it two groups of balls of paper. Next, they hid the two piles behind screens, changed the quantities and revealed them to the chick. This forced the chick to perform simple computations to decide which side now contained the biggest number of its "brothers". Without any prior coaching, the chicks scuttled to the larger quantity at a rate well above chance. They were doing some very simple arithmetic, claim the researchers.

## H

Why these skills evolved is not hard to imagine, since it would help almost any animal forage for food. Animals on the prowl for sustenance must constantly decide which tree

has the most fruit, or which patch of flowers will contain the most nectar. There are also other, less obvious, advantages of numeracy. In one compelling example, researchers in America found that female coots) appear to calculate how many eggs they have laid – and add any in the nest laid by an intruder - before making any decisions about adding to them. Exactly how ancient these skills are is difficult to determine, however. Only by studying the numerical abilities of more and more creatures using standardized procedures can we hope to understand the basic preconditions for the evolution of number.

### Questions 15-21

Answer the table below.

Choose NO MORE THAN THREE WORDS AND/OR A NUMBER from the passage for each answer. Write your answers in boxes 15-21 on your answer sheet

Animal Numeracy		
Subjects	Experiments	Results
<b>Mammals and birds</b>		
rhesus monkeys and humans	looked at two sets of geometrical objects on computer screen	performance of two groups is on almost 15.....
Chicks	chose between two sets of 16..... which are altered	chicks can do calculations in order to choose larger group
Coots	behaviour of female birds was observed	bird seems to have ability to 17.....
<b>Amphibians, fish and insects</b>		

Salamanders	offered clear tubes containing different quantities of 18.....	salamanders distinguish between numbers over four if bigger number is at least two times larger
19 .....	shown real shoals and later artificial ones of geometrical shapes; these are used to check influence of total 20..... and brightness	subjects know difference between two and three and possibly three and four, but not between four and five
Bees	had to learn where 21..... was stored	could soon choose correct place

### Question 22-27

Do the following statements agree with the information given in Reading Passage 2? In boxes 22-27 on your answer sheet, write

**TRUE** if the statement is true

**FALSE** if the statement is false

**NOT GIVEN** if the information is not given in the passage

22 Primates are better at identifying the larger of two numbers if one is much bigger than the other.

23 Jurgen Tautz trained the insects in his experiment to recognise the shapes of individual numbers.

24 The research involving young chicks took place over two separate days.



25 The experiment with chicks suggests that some numerical ability exists in newborn animals.

26 Researchers have experimented by altering quantities of nectar or fruit available to certain wild animals.

27 When assessing the number of eggs in their nest, coots take into account those of other birds.

## SECTION 3

### Multitasking Debate

*Can you do them at the same time?*

A

Talking on the phone while driving isn't the only situation where we're worse at multitasking than we might like to think we are. New studies have identified a bottleneck in our brains that some say means we are fundamentally incapable of true multitasking. If experimental findings reflect real-world performance, people who think they are multitasking are probably just underperforming in all - or at best, all but one - of their parallel pursuits. Practice might improve your performance, but you will never be as good as when focusing on one task at a time.

B

The problem, according to Rene Marois, a psychologist at Vanderbilt University in Nashville, Tennessee, is that there's a sticking point in the brain. To demonstrate this, Marois devised an experiment to locate it. Volunteers watch a screen and when a particular image appears, a red circle, say, they have to press a key with their index finger. Different coloured circles require presses from different fingers. Typical response time is about half a second, and the volunteers quickly reach their peak performance. Then they learn to listen to different recordings and respond by making a specific sound. For

instance, when they hear a bird chirp, they have to say "ba"; an electronic sound should elicit a "ko", and so on. Again, no problem. A normal person can do that in about half a second, with almost no effort.

## C

The trouble comes when Marois shows the volunteers an image, and then almost immediately plays them a sound. Now they're flummoxed. "If you show an image and play a sound at the same time, one task is postponed," he says. In fact, if the second task is introduced within the half-second or so it takes to process and react to the first, it will simply be delayed until the first one is done. The largest dual-task delays occur when the two tasks are presented simultaneously; delays progressively shorten as the interval between presenting the tasks lengthens.

## D

There are at least three points where we seem to get stuck, says Marois. The first is in simply identifying what we're looking at. This can take a few tenths of a second, during which time we are not able to see and recognise second item. This limitation is known as the "attentional blink": experiments have shown that if you're watching out for a particular event and a second one shows up unexpectedly any time within this crucial window of concentration, it may register in your visual cortex but you will be unable to act upon it. Interestingly, if you don't expect the first event, you have no trouble responding to the second. What exactly causes the attentional blink is still a matter for debate.

## E

A second limitation is in our short-term visual memory. It's estimated that we can keep track of about four items at a time, fewer if they are complex. This capacity shortage is thought to explain, in part, our astonishing inability to detect even huge changes in scenes that are otherwise identical, so-called "change blindness". Show people pairs of near-identical photos - say, aircraft engines in one picture have disappeared in the other - and they will fail to spot the differences. Here again, though, there is disagreement about what the essential limiting factor really is. Does it come down to a dearth of storage capacity, or is it about how much attention a viewer is paying?

F

A third limitation is that choosing a response to a stimulus - braking when you see a child in the road, for instance, or replying when your mother tells you over the phone that she's thinking of leaving your dad - also takes brainpower. Selecting a response to one of these things will delay by some tenths of a second your ability to respond to the other. This is called the "response selection bottleneck" theory, first proposed in 1952.

G

But David Meyer, a psychologist at the University of Michigan, Ann Arbor, doesn't buy the bottleneck idea. He thinks dual-task interference is just evidence of a strategy used by the brain to prioritise multiple activities. Meyer is known as something of an optimist by his peers. He has written papers with titles like "Virtually perfect time-sharing in dual-task performance: Uncorking the central cognitive bottleneck". His experiments have shown that with enough practice - at least 2000 tries - some people can execute two tasks simultaneously as competently as if they were doing them one after the other. He suggests that there is a central cognitive processor that coordinates all this and, what's more, he thinks it uses discretion sometimes it chooses to delay one task while completing another.

H

Marois agrees that practice can sometimes erase interference effects. He has found that with just 1 hour of practice each day for two weeks, volunteers show a huge improvement at managing both his tasks at once. Where he disagrees with Meyer is in what the brain is doing to achieve this. Marois speculates that practice might give us the chance to find less congested circuits to execute a task - rather like finding trusty back streets to avoid heavy traffic on main roads - effectively making our response to the task subconscious. After all, there are plenty of examples of subconscious multitasking that most of us routinely manage: walking and talking, eating and reading, watching TV and folding the laundry.

I

It probably comes as no surprise that, generally speaking, we get worse at multitasking

as we age. According to Art Kramer at the University of Illinois at Urbana- Champaign, who studies how ageing affects our cognitive abilities, we peak in our 20s. Though the decline is slow through our 30s and on into our 50s, it is there; and after 55, it becomes more precipitous. In one study, he and his colleagues had both young and old participants do a simulated driving task while carrying on a conversation. He found that while young drivers tended to miss background changes, older drivers failed to notice things that were highly relevant. Likewise, older subjects had more trouble paying attention to the more important parts of a scene than young drivers.

J

It's not all bad news for over-55s, though. Kramer also found that older people can benefit from practice. Not only did they learn to perform better, brain scans showed that underlying that improvement was a change in the way their brains become active. While it's clear that practice can often make a difference, especially as we age, the basic facts remain sobering. "We have this impression of an almighty complex brain," says Marois, "and yet we have very humbling and crippling limits." For most of our history, we probably never needed to do more than one thing at a time, he says, and so we haven't evolved to be able to. Perhaps we will in future, though. We might yet look back one day on people like Debbie and Alun as ancestors of a new breed of true multitasker.

### **Questions 28-32**

The reading Passage has ten paragraphs A-J.

Which paragraph contains the following information?

Write the correct letter in boxes 28-32 on your answer sheet.

28 A theory explained delay happens when selecting one reaction

29 Different age group responds to important things differently

30 Conflicts happened when visual and audio element emerge simultaneously

31 An experiment designed to demonstrate the critical part in brain for multitasking

32 An viewpoint favors optimistic side of multitask performance

### **Questions 33-35**

Choose the correct letter, A, B, C or D.

Write your answers in boxes 33-35 on your answer sheet.

33 Which one is correct about experiment conducted by Ren6 Marois?

A participants performed poorly on listening task solely

B volunteers press different key on different color

C participants need use different fingers on different colored object

D they did a better job on Mixed image and sound information

34 Which statement is correct about the first limitation of Marois's experiment?

A “attentional blink” takes about ten seconds

B lag occurs if we concentrate on one object while second one appears

C we always have trouble in reacting the second one

D first limitation can be avoid by certain measures

35 Which one is NOT correct about Meyer's experiments and statements?

A just after failure in several attempts can people execute dual-task

B Practice can overcome dual-task interference

C Meyer holds a different opinion on Marois's theory

Does an existing processor decide whether to delay another task or not?

### **Questions 36-40**

Do the following statements agree with the information given in Reading Passage 3? In boxes 36-40 on your answer sheet, write

YES if the statement is true

NO if the statement is false

NOT GIVEN if the information is not given in the passage

36 Longer gap between two presenting tasks means shorter delay toward the second one.

37 Incapable in human memory cause people sometimes miss the differences when presented two similar images.

38 Marois has different opinion on the claim that training removes bottleneck effect.

39 Art Kramer proved there is a correlation between multitasking performance and genders

40 The author doesn't believe that effect of practice could bring any variation.

# Reading Test 9

## SECTION 1

### Organic farming and chemical fertilisers

A

The world's population continues to climb. And despite the rise of high-tech agriculture, 800 million people don't get enough to eat. Clearly it's time to rethink the food we eat and where it comes from. Feeding 9 billion people will take more than the same old farming practices, especially if we want to do it without felling rainforests and planting every last scrap of prairie. Finding food for all those people will tax predicting farmers'—and researchers'—ingenuity to the limit. Yet already, precious aquifers that provide irrigation water for some of the world's most productive farmlands are drying up or filling with seawater, and arable land in China is eroding to create vast dust storms that redden sunsets as far away as North America. "Agriculture must become the solution to environmental problems in 50 years. If we don't have systems that make the environment better not just hold the fort—then we're in trouble," says Kenneth Cassman, an agronomist at the University of Nebraska at Lincoln. That view was echoed in January by the Curry report, a government panel that surveyed the future of farming and food in Britain.

B

It's easy to say agriculture has to do better, but what should this friendly farming of the future look like? Concerned consumers come up short at this point, facing what appears to be an ever-widening ideological divide. In one corner are the techno-optimists who put their faith in genetically modified crops, improved agrochemicals and computer-enhanced machinery; in the other are advocates of organic farming, who reject artificial chemicals and embrace back-to-nature techniques such as composting. Both sides cite plausible science to back their claims to the moral high ground, and both bring enough passion to the debate for many people to come away thinking we're faced with a stark choice between two mutually incompatible options.

C

Not so. If you take off the ideological blinkers and simply ask how the world can produce the food it needs with the least environmental cost, a new middle way opens. The key is sustainability: whatever we do must not destroy the capital of soil and water we need to keep on producing. Like today's organic farming, the intelligent farming of the future should pay much more attention to the health of its soil and the ecosystem it's part of. But intelligent farming should also make shrewd and locally appropriate use of chemical fertilisers and pesticides. The most crucial ingredient in this new style of agriculture is not chemicals but information about what's happening in each field and how to respond. Yet ironically, this key element may be the most neglected today.

D

Clearly, organic farming has all the warm, fuzzy sentiment on its side. An approach that eschews synthetic chemicals surely runs no risk of poisoning land and water. And its emphasis on building up natural ecosystems seems to be good for everyone. Perhaps these easy assumptions explain why sales of organic food across Europe are increasing by at least 50 per cent per year.

E

Going organic sounds idyllic-but it's naive, too. Organic agriculture has its own suite of environmental costs, which can be worse than those of conventional farming, especially if it were to become the world norm. But more fundamentally, the organic versus-chemical debate focuses on the wrong question. The issue isn't what you put into a farm, but what you get out of it, both in terms of crop yields and pollutants, and what condition the farm is in when you're done.

F

Take chemical fertilisers, which deliver nitrogen, an essential plant nutrient, to crops along with some phosphorus and potassium. It is a mantra of organic farming that these fertilisers are unwholesome, and plant nutrients must come from natural sources. But in fact the main environmental damage done by chemical fertilisers as opposed to any other kind is through greenhouse gases-carbon dioxide from the fossil fuels used in their



synthesis and nitrogen oxides released by their degradation. Excess nitrogen from chemical fertilisers can pollute groundwater, but so can excess nitrogen from organic manures.

## G

On the other hand, relying solely on chemical fertilisers to provide soil nutrients without doing other things to build healthy soil is damaging. Organic farmers don't use chemical fertilisers, so they are very good at building soil fertility by working crop residues and manure into the soil, rotating with legumes that fix atmospheric nitrogen, and other techniques.

## H

This generates vital soil nutrients and also creates a soil that is richer in organic matter, so it retains nutrients better and is hospitable to the crop's roots and creatures such as earthworms that help maintain soil fertility. Such soil also holds water better and therefore makes more efficient use of both rainfall and irrigation water. And organic matter ties up CO<sub>2</sub> in the soil, helping to offset emissions from burning fossil fuels and reduce global warming.

## I

Advocates of organic farming like to point out that fields managed in this way can produce yields just as high as fields juiced up with synthetic fertilisers. For example, Bill Liebhardt, research manager at the Rodale Institute in Kutztown, Pennsylvania recently compiled the results of such comparisons for corn, wheat, soybeans and tomatoes in the US and found that the organic fields averaged between 94 and 100 per cent of the yields of nearby conventional crops.

## J

But this optimistic picture tells only half the story. Farmers can't grow such crops every year if they want to maintain or build soil nutrients without synthetic fertilisers. They need to alternate with soil-building crops such as pasture grasses and legumes such as alfalfa. So in the long term, the yield of staple grains such as wheat, rice and corn must go down.

This is the biggest cost of organic farming. Vaclav Smil of the University of Manitoba in Winnipeg, Canada, estimates that if farmers worldwide gave up the 80 million tonnes of synthetic fertiliser they now use each year, total grain production would fall by at least half. Either farmers would have to double the amount of land they cultivate- at catastrophic cost to natural habitat --or billions of people would starve.

K

That doesn't mean farmers couldn't get by with less fertilizer. Technologically advanced farmers in wealthy countries, for instance, can now monitor their yields hectare by hectare, or even more finely, throughout a huge field. They can then target their fertiliser to the parts of the field where it will do the most good, instead of responding to average conditions. This increases yield and decreases fertiliser use. Eventually, farmers may - incorporate long-term weather forecasts into their planning as well, so that they can cut back on fertiliser use when the weather is likely to make harvests poor anyway, says Ron Olson, an agronomist with Cargill Fertilizer in Tampa, Florida.

L

Organic techniques certainly have their benefits, especially for poor farmers. But strict "organic agriculture", which prohibits certain technologies and allows others, isn't always better for the environment. Take herbicides, for example. These can leach into waterways and poison both wildlife and people. Just last month, researchers led by Tyrone Hayes at the University of California at Berkeley found that even low concentrations of atrazine, the most commonly used weedkiller in the US, can prevent frog tadpoles from developing properly.

### Questions 1 - 4

Use the information in the passage to match the people (listed A-D) with opinions or deeds below. Write the appropriate letters A-D in boxes 1-4 on your answer sheet.

A Vaclav Smil

B Bill Liebhardt

C Kenneth Cassman

D Ron Olson

1 Use of chemical fertilizer can be optimised by combining weather information.

2 Organic farming yield is nearly equal to traditional ones.

3 Better agricultural setting is a significant key to solve environmental tough nut.

4 Substantial production loss would happen in case all farmers shifted from using synthetic fertiliser.

### **Questions 5 - 9**

Do the following statements agree with the information given in Reading Passage 1 In boxes 5-9 on your answer sheet, write

YES if the statement agrees with the information

NO if the statement contradicts the information

NOT GIVEN if there is no information on this

5 Increasing population, draining irrigation, eroding farmland push agricultural industry to extremity.

6 There are only two options for farmers; they use chemical fertiliser or natural approach.

7 Chemical fertilizer currently are more expensive than the natural fertilisers.

8 In order to keep nutrient in the soil, organic farmers need to rotate planting method.

9 "organic agriculture" is the way that environment-damaging technologies are all strictly forbidden.

### Questions 10-13

Complete the following summary of the paragraphs of Reading Passage, using no more than two words from the Reading Passage for each answer. Write your answers in boxes 10-13 on your answer sheet.

Several 10 ..... approaches need to be applied in order that global population wouldn't go starved. A team called 11 ..... repeated the viewpoint of a scholar by a survey in British farming. More and more European farmers believe in 12 ..... farming these years. The argument of organic against 13 ..... seems in an inaccurate direction.

## SECTION 2

You should spend about 20 minutes on Questions 14-26, which are based on Reading Passage 1 on the following pages.

### The Pearl

A

Throughout history, pearls have held a unique presence within the wealthy and powerful. For instance, the pearl was the favored gem of the wealthy during the Roman Empire. This gift from the sea had been brought back from the orient by the Roman conquests. Roman women wore pearls to bed so they could be reminded of their wealth immediately upon waking up. Before jewelers learned to cut gems, the pearl was of greater value than the diamond. In the Orient and Persia Empire, pearls were ground into powders to cure anything from heart disease to epilepsy, with possible aphrodisiac uses as well. Pearls were once considered an exclusive privilege for royalty. A law in 1612 drawn up by the Duke of Saxony prohibited the wearing of pearls by nobility, professors, doctors or their wives in an effort to further distinguish royal appearance. American Indians also used freshwater pearls from the Mississippi River as decorations and jewelry.

B

There are essentially three types of pearls: natural, cultured and imitation. A natural pearl (often called an Oriental pearl) forms when an irritant, such as a piece of sand, works its way into a particular species of oyster, mussel, or clam. As a defense mechanism, the mollusk secretes a fluid to coat the irritant. Layer upon layer of this coating is deposited on the irritant until a lustrous pearl is formed.

C

The only difference natural pearls and cultured pearls is that the irritant is a surgically implanted bead or piece of shell called Mother of Pearl. Often, these shells are ground oyster shells that are worth significant amounts of money in their own right as irritant-catalysts for quality pearls. The resulting core is, therefore, much larger than in a natural pearl. Yet, as long as there are enough layers of nacre (the secreted fluid covering the irritant) to result in a beautiful, gem-quality pearl, the size of the nucleus is of no consequence to beauty or durability.

D

Pearls can come from either salt or freshwater sources. Typically, saltwater pearls tend to be higher quality, although there are several types of freshwater pearls that are considered high in quality as well. Freshwater pearls tend to be very irregular in shape, with a puffed rice appearance the most prevalent. Nevertheless, it is each individual pearls merits that determines value more than the source of the pearl. Saltwater pearl oysters are usually cultivated in protected lagoons or volcanic atolls. However, most freshwater cultured pearls sold today come from China. Cultured pearls are the response of the shell to a tissue implant. A tiny piece of mantle tissue from a donor shell is transplanted into a recipient shell. This graft will form a pearl sac and the tissue will precipitate calcium carbonate into this pocket. There are a number of options for producing cultured pearls: use freshwater or seawater shells, transplant the graft into the mantle or into the gonad, add a spherical bead or do it non-beaded. The majority of saltwater cultured pearls are grown with beads.

## E

Regardless of the method used to acquire a pearl, the process usually takes several years. Mussels must reach a mature age, which can take up to 3 years, and then be implanted or naturally receive an irritant. Once the irritant is in place, it can take up to another 3 years for the pearl to reach its full size. Often, the irritant may be rejected, the pearl will be terrifically misshapen, or the oyster may simply die from disease or countless other complications. By the end of a 5 to 10 year cycle, only 50% of the oysters will have survived. And of the pearls produced, only approximately 5% are of substantial quality for top jewelry makers. From the outset, a pearl farmer can figure on spending over \$100 for every oyster that is farmed, of which many will produce nothing or die.

## F

Imitation pearls are a different story altogether. In most cases, a glass bead is dipped into a solution made from fish scales. This coating is thin and may eventually wear off. One can usually tell an imitation by biting on it. Fake pearls glide across your teeth, while the layers of nacre on real pearls feel gritty. The Island of Mallorca (in Spain) is known for its imitation pearl industry. Quality natural pearls are very rare jewels. The actual value of a natural pearl is determined in the same way as it would be for other "precious" gems. The valuation factors include size, shape, and color, quality of surface, orient and luster. In general, cultured pearls are less valuable than natural pearls, whereas imitation pearls almost have no value. One way that jewelers can determine whether a pearl is cultured or natural is to have a gem lab perform an x-ray of the pearl. If the x-ray reveals a nucleus, the pearl is likely a bead-nucleated saltwater pearl. If no nucleus is present, but irregular and small dark inner spots indicating a cavity are visible, combined with concentric rings of organic substance, the pearl is likely a cultured freshwater. Cultured freshwater pearls can often be confused for natural pearls which present as homogeneous pictures which continuously darken toward the surface of the pearl. Natural pearls will often show larger cavities where organic matter has dried out and decomposed. Although imitation pearls look the part, they do not have the same weight or smoothness as real pearls, and their luster will also dim greatly. Among cultured pearls, Akoya pearls from Japan are some of the most lustrous. A good quality necklace of 40 Akoya pearls measuring 7mm in diameter

sells for about \$1,500, while a super- high quality strand sells for about \$4,500. Size on the other hand, has to do with the age of the oyster that created the pearl (the more mature oysters produce larger pearls) and the location in which the pearl was cultured. The South Sea waters of Australia tend to produce the larger pearls; probably because the water along the coast line is supplied with rich nutrients from the ocean floor. Also, the type of mussel common to the area seems to possess a predilection for producing comparatively large pearls

G

Historically, the world's best pearls came from the Persian Gulf, especially around what is now Bahrain. The pearls of the Persian Gulf were natural created and collected by breath-hold divers. The secret to the special luster of Gulf pearls probably derived from the unique mixture of sweet and salt water around the island. Unfortunately, the natural pearl industry of the Persian Gulf ended abruptly in the early 1930's with the discovery of large deposits of oil. Those who once dove for pearls sought prosperity in the economic boom ushered in by the oil industry. The water pollution resulting from spilled oil and indiscriminate over-fishing of oysters essentially ruined the once pristine pearl producing waters of the Gulf. Today, pearl diving is practiced only as a hobby. Still, Bahrain remains one of the foremost trading centers for high quality pearls. In fact, cultured pearls are banned from the Bahrain pearl market, in an effort to preserve the location's heritage. Nowadays, the largest stock of natural pearls probably resides in India. Ironically, much of India's stock of natural pearls came originally from Bahrain. Unlike Bahrain, which has essentially lost its pearl resource, traditional pearl fishing is still practiced on a small scale in India.

### **Questions 14-17**

Reading Passage 1 has seven paragraphs, A-G. Which paragraph contains the following information?

Write the correct letter A-G in boxes 1-4 on your answer sheet.

14 ancient stories around the pearl and customers

15 Difficulties in cultivating process.

16 Factors can decide the value of natural pearls.

17 Different growth mechanisms that distinguish the cultured pearls from natural ones.

### Questions 18 - 23

Complete the summary below

Choose letter from A-K for each answer. Write them in boxes 5-10 on your answer sheet.

In ancient history, pearls have great importance within the rich and rulers, which was treated as gem for women in 18..... And pearls were even used as medicine and sex drug for people in 19..... There are essentially three types of pearls: natural, cultured and imitation. Most freshwater cultured pearls sold today come from China while the 20..... is famous for its imitation pearl industry. The country 21..... usually manufactures some of the glitteriest cultured ones while the nation such as 22..... produces the larger sized pearl due to the favorable environment along the coast line. In the past, one country of 23 ..... in Gulf produced the world's best pearls. Nowadays, the major remaining suppliers of the natural pearls belongs to India

A America   B Ancient Rome   C Australia

D Bahrain   E China   F Japan   G India

H Korea   I Mexico   J Persia   K Spain

### Questions 24 - 27

Do the following statements agree with the information given in the Reading Passage 1?  
In boxes 11-14 on your answer sheet, write

*TRUE      If the statement is true*



*FALSE if the statement is false*

*NOT GIVEN if the information is not given in the passage*

24 Often cultured pearl's centre is significantly larger than in a natural pearl.

25 Cultivated cultured pearls are generally valued the same much as natural ones.

26 The size of pearls produced in Japan is usually of smaller size than those came from Australia.

27 Akoya pearls from Japan Glows more deeply than the South Sea pearls of Australia

### **SECTION 3**

#### **Scent of success**

A

Innovation and entrepreneurship, in the right mix, can bring spectacular results and propel a business ahead of the pack. Across a diverse range of commercial successes, from the Hills Hoist clothes line to the Cochlear ear implant, it is hard to generalize beyond saying the creators tapped into something consumers could not wait to get their hands on. However, most ideas never make it to the market. Some ideas that innovators are spruiking to potential investors include new water-saving shower heads, a keyless locking system, ping-pong balls that keep pollution out of rainwater tanks, making teeth grow from stem cells inserted in the gum, and technology to stop LPG tanks from exploding. Grant Kearney, chief executive of the Innovation Xchange, which connects businesses to innovation networks, says he hears of great business ideas that he knows will never get on the market. "Ideas by themselves are absolutely useless," he says. "An idea only becomes innovation when it is connected to the right resources and capabilities."

B

One of Australia's latest innovation successes stems from a lemon-scented bath-room

cleaner called Shower Power, the formula for which was concocted in a factory in Yatala, Queensland. In 1995, Tom Quinn and John Heron bought a struggling cleaning products business, OzKleen, for 250,000. It was selling 100 different kinds of cleaning products, mainly in bulk. The business was in bad shape, the cleaning formulas were ineffective and environmentally harsh, and there were few regular clients. Now Shower Power is claimed to be the top-selling bathroom cleaning product in the country. In the past 12 months, almost four million bottles of OzKleen's Power products have been sold and the company forecasts 2004 sales of 10 million bottles. The company's sales in 2003 reached \$11 million, with 700k of business being exports. In particular, Shower Power is making big inroads on the British market.

## C

OzKleen's turnaround began when Quinn and Heron hired an industrial chemist to revitalize the product line. Market research showed that people were looking for a better cleaner for the bathroom, universally regarded as the hardest room in the home to clean. The company also wanted to make the product formulas more environmentally friendly. One of Tom Quinn's sons, Peter, aged 24 at the time, began working with the chemist on the formulas, looking at the potential for citrus-based cleaning products. He detested all the chlorine-based cleaning products that dominated the market. "We didn't want to use chlorine, simple as that," he says. "It offers bad working conditions and there's no money in it." Peter looked at citrus ingredients, such as orange peel, to replace the petroleum by-products in cleaners. He is credited with finding the Shower Power formula. "The head," he says. The company is the recipe is in a vault somewhere and in my sole owner of the intellectual property.

## D

To begin with, Shower Power was sold only in commercial quantities but Tom Quinn decided to sell it in 750ml bottles after the constant "raves" from customers at their retail store at Beenleigh, near Brisbane. Customers were traveling long distances to buy supplies. Others began writing to OzKleen to say how good Shower Power was. "We did a dummy label and went to see Woolworths," Tom Quinn says. The Woolworths buyer took a bottle home and was able to remove a stain from her basin that had been

impossible to shift. From that point on, she championed the product and OzKleen had its first supermarket order, for a palette of Shower Power worth \$3000. "We were over the moon," says OzKleen's financial controller, Belinda McDonnell.

E

Shower Power was released in Australian supermarkets in 1997 and became the top-selling product in its category within six months. It was all hands on deck at the factory, labeling and bottling Shower Power to keep up with demand. OzKleen ditched all other products and rebuilt the business around Shower Power. This stage, recalls McDonnell, was very tough. "It was hand-to-mouth, cash flow was very difficult," she says. OzKleen had to pay new-line fees to supermarket chains, which also squeezed margins.

F

OzKleen's next big break came when the daughter of a Coles Myer executive<sup>1</sup> used the product while on holidays in Queensland and convinced her father that Shower Power should be in Coles supermarkets. Despite the product success, Peter Quinn says the company was wary of how long the sales would last and hesitate to spend money on upgrading the manufacturing process. As a result, he remembers long periods of working around the clock to keep up with orders. Small tanks were still being used so batches were small and bottles were labeled and filled manually. The privately owned OzKleen relied on cash-flow to expand. "The equipment could not keep up with demand," Peter Quinn says. Eventually a new bottling machine was bought for \$50,000 in the hope of streamlining production, but he says: "We got ripped off." Since then he has been developing a new automated bottling machine that can control the amount of foam produced in the liquid, so that bottles can be filled more effectively - "I love coming up with new ideas." The machine is being patented.

G

Peter Quinn says OzKleen's approach to research and development is open slather. "If I need it, I get it. It is about doing something simple that no one else is doing. Most of these things are just sitting in front of people ... it's just seeing the opportunities." With a tried and tested product, OzKleen is expanding overseas and developing more Power-brand

household products. Tom Quinn, who previously ran a real estate agency, says: "We are competing with the same market all over the world; the (cleaning) products are sold everywhere." Shower Power, known as Bath Power in Britain, was launched four years ago with the help of an export development grant from the Federal Government. "We wanted to do it straight away because we realized we had the same opportunities worldwide." OzKleen is already number three in the British market, and the next stop is France. The Power range includes cleaning products for carpets, kitchens and pre-wash stain removal. The Quinn and Heron families are still involved. OzKleen has been approached with offers to buy the company, but Tom Quinn says he is happy with things as they are. "We're having too much fun."

### **Questions 28-34**

Reading Passage 1 has six paragraphs, A—G.

Which paragraph contains the following information?

Write the correct letter A-G, in boxes 1-7 on your answer sheet.

NB You may use any letter more than once.

28 Description of one family member persuading another of selling cleaning products

29 An account of the cooperation of all factory staff to cope with sales increase

30 An account of the creation of the formula of Shower Power

31 An account of buying the original OzKleen company

32 Description of Shower Power's international expansion

33 The reason of changing the packaging size of Shower Power

34 An example of some innovative ideas

### Questions 35 - 38

Look at the following people and list of statements below.

Match each person with the correct statement

Write the correct letter A-E in boxes 8-11 on your answer sheet.

35 Grant Keamey

36 Tom Quinn

37 Peter Quinn

38 Belinda McDonnell

List of Statement

A Described his story of selling his product to a chain store

B Explained there was a shortage of money when sales suddenly increased

C Believe innovations need support to succeed

D Believes new products like Shower Power may incur risks

E Says business won't succeed with innovations

### Questions 39 - 40

Choose the correct letter A, B, C or D.

Write your answers in boxes 12-13 on your answer sheet.

39 Tom Quinn changed the bottle size to 750ml to make Shower Power

A Easier to package.

B Appealing to individual customers.

C Popular in foreign markets.

D Attractive to supermarkets.

40 Why did Tom Quinn decide not to sell OzKleen?

A No one wanted to buy OzKleen.

B New products were being developed in OzKleen.

C He couldn't make an agreement on the price with the buyer.

D He wanted to keep things unchanged.

# Reading Test 10

## SECTION 1

### Coastal Archaeology of Britain

**A** The recognition of the wealth and diversity of England's coastal archaeology has been one of the most important developments of recent years. Some elements of this enormous resource have long been known. The so-called 'submerged forests' off the coasts of England, sometimes with clear evidence of human activity, had attracted the interest of antiquarians since at least the eighteenth century but serious and systematic attention has been given to the archaeological potential of the coast only since the early 1980s.

**B** It is possible to trace a variety of causes for this concentration of effort and interest. In the 1980s and 1990s scientific research into climate change and its environmental impact spilled over into a much broader public debate as awareness of these issues grew; the prospect of rising sea levels over the next century, and their impact on current coastal environments, has been a particular focus for concern. At the same time archaeologists were beginning to recognize that the destruction caused by natural processes of coastal erosion and by human activity was having an increasing impact on the archaeological resource of the coast.

**C** The dominant process affecting the physical form of England in the post-glacial period has been the rise in the altitude of sea level relative to the land, as the glaciers melted and the landmass readjusted. The encroachment of the sea, the loss of huge areas of land now under the North Sea and the English Channel, and especially the loss of the land bridge between England and France, which finally made Britain an island, must have been immensely significant factors in the lives of our prehistoric ancestors. Yet the way in which prehistoric communities adjusted to these environmental changes has seldom been a major theme in discussions of the period. One factor contributing to this has been that, although the rise in relative sea level is comparatively well documented, we know little about the constant reconfiguration of the coastline. This was affected by many

processes, mostly quiet, which have not yet been adequately researched. The detailed reconstruction of coastline histories and the changing environments available for human use will be an important theme for future research.

**D** So great has been the rise in sea level and the consequent regression of the coast that much of the archaeological evidence now exposed in the coastal zone, whether being eroded or exposed as a buried land surface, is derived from what was originally terrestrial occupation. Its current location in the coastal zone is the product of later unrelated processes, and it can tell us little about past adaptations to the sea. Estimates of its significance will need to be made in the context of other related evidence from dry land sites. Nevertheless, its physical environment means that preservation is often excellent, for example in the case of the Neolithic structure excavated at the Stumble in Essex.

**E** In some cases these buried land surfaces do contain evidence for human exploitation of what was a coastal environment, and elsewhere along the modern coast there is similar evidence. Where the evidence does relate to past human exploitation of the resources and the opportunities offered by the sea and the coast, it is both diverse and as yet little understood. We are not yet in a position to make even preliminary estimates of answers to such fundamental questions as the extent to which the sea and the coast affected human life in the past, what percentage of the population at any time lived within reach of the sea, or whether human settlements in coastal environments showed a distinct character from those inland.

**F** The most striking evidence for use of the sea is in the form of boats, yet we still have much to learn about their production and use. Most of the known wrecks around our coast are not unexpectedly of post-medieval date, and offer an unparalleled opportunity for research which has as yet been little used. The prehistoric sewn-plank boats such as those from the Humber estuary and Dover all seem to belong to the second millennium BC; after this there is a gap in the record of a millennium, which cannot yet be explained, before boats reappear, but built using a very different technology. Boatbuilding must have been an extremely important activity around much of our coast, yet we know almost nothing about it, Boats were some of the most complex artefacts produced by pre-modern



societies, and further research on their production and use make an important contribution to our understanding of past attitudes to technology and technological change.

**G** Boats needed landing places, yet here again our knowledge is very patchy. In many cases the natural shores and beaches would have sufficed, leaving little or no archaeological trace, but especially in later periods, many ports and harbors, as well as smaller facilities such as quays, wharves, and jetties, were built. Despite a growth of interest in the waterfront archaeology of some of our more important Roman and medieval towns, very little attention has been paid to the multitude of smaller landing places. Redevelopment of harbor sites and other development and natural pressures along the coast are subjecting these important locations to unprecedented threats, yet few surveys of such sites have been undertaken.

**H** One of the most important revelations of recent research has been the extent of industrial activity along the coast. Fishing and salt production are among the better documented activities, but even here our knowledge is patchy. Many forms of fishing will leave little archaeological trace, and one of the surprises of recent survey has been the extent of past investment in facilities for procuring fish and shellfish. Elaborate wooden fish weirs, often of considerable extent and responsive to aerial photography in shallow water, have been identified in areas such as Essex and the Severn estuary. The production of salt, especially in the late Iron Age and early Roman periods, has been recognized for some time, especially in the Thames estuary and around the Solent and Poole Harbor, but the reasons for the decline of that industry and the nature of later coastal salt working are much less well understood. Other industries were also located along the coast, either because the raw materials outcropped there or for ease of working and transport: mineral resources such as sand, gravel, stone, coal, ironstone, and alum were all exploited. These industries are poorly documented, but their remains are sometimes extensive and striking.

**I** Some appreciation of the variety and importance of the archaeological remains preserved in the coastal zone, albeit only in preliminary form, can thus be gained from

recent work, but the complexity of the problem of managing that resource is also being realised. The problem arises not only from the scale and variety of the archaeological remains, but also from two other sources: the very varied natural and human threats to the resource, and the complex web of organisations with authority over, or interests in, the coastal zone. Human threats include the redevelopment of historic towns and old dockland areas, and the increased importance of the coast for the leisure and tourism industries, resulting in pressure for the increased provision of facilities such as marinas. The larger size of ferries has also caused an increase in the damage caused by their wash to fragile deposits in the intertidal zone. The most significant natural threat is the predicted rise in sea level over the next century especially in the south and east of England. Its impact on archaeology is not easy to predict, and though it is likely to be highly localised, it will be at a scale much larger than that of most archaeological sites. Thus protecting one site may simply result in transposing the threat to a point further along the coast. The management of the archaeological remains will have to be considered in a much longer time scale and a much wider geographical scale than is common in the case of dry land sites, and this will pose a serious challenge for archaeologists.

### **Questions 1-3**

Choose the correct letter, A, B, C or D.

Write your answers in boxes 1-3 on your answer sheet.

1. What has caused public interest in coastal archaeology in recent years?

A Golds and jewelleries in the ships that have submerged

B The rising awareness of climate change

C Forests under the sea

D Technological advance in the field of sea research

2. What does the passage say about the evidence of boats?

A We have a good knowledge of how boats were made and what boats were for prehistorically

B Most of the boats discovered were found in harbors

C The use of boats had not been recorded for a thousand years

D The way to build boats has remained unchanged throughout human history

3. What can be discovered from the air?

A Salt mines

B Shellfish

C Ironstones

D Fisheries

### Questions 4-10

Do the following statements agree with the information given in Reading Passage 1? In boxes 4-10 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

4. England lost much of its land after the ice-age due to the rising sea level.

5. The coastline of England has changed periodically.

6. Coastal archaeological evidence may be well-protected by sea water.

7. The design of boats used by pre-modern people was very simple.
8. Similar boats were also discovered in many other European countries
9. There are few documents relating to mineral exploitation.
10. Large passenger boats are causing increasing damage to the seashore.

### **Questions 11-13**

Choose THREE letters J-G Write your answer in boxes 11-13 on your answer sheet  
Which THREE of the following statements are mentioned in the passage?

- A Our prehistoric ancestors adjusted to the environmental change caused by the rising sea level by moving to higher lands
- B It is difficult to understand how many people lived close to the sea.
- C Human settlements in coastal environment were different from those inland.
- D Our knowledge of boat evidence is limited.
- E The prehistoric boats were built mainly for collecting sand from the river.
- F Human development threatens the archaeological remains.
- G The reason for the decline of salt industry was the shortage of laborers.

## **SECTION 2**

### **Activities for Children**

**A** Twenty-five years ago, children in London walked to school and played in parks and playing fields after school and at the weekend. Today they are usually driven to school

by parents anxious about safety and spend hours glued to television screens or computer games. Meanwhile, community playing fields are being sold off to property developers at an alarming rate. 'This change in lifestyle has, sadly, meant greater restrictions on children,' says Neil Armstrong, Professor of Health and Exercise Sciences at the University of Exeter. 'If children continue to be this inactive, they'll be storing up big problems for the future.'

**B** In 1985, Professor Armstrong headed a five-year research project into children's fitness. The results, published in 1990, were alarming. The survey, which monitored 700 11-16-year-olds, found that 48 per cent of girls and 41 per cent of boys already exceeded safe cholesterol levels set for children by the American Heart Foundation. Armstrong adds, "heart is a muscle and need exercise, or it loses its strength." It also found that 13 per cent of boys and 10 per cent of girls were overweight. More disturbingly, the survey found that over a four-day period, half the girls and one-third of the boys did less exercise than the equivalent of a brisk 10-minute walk. High levels of cholesterol, excess body fat and inactivity are believed to increase the risk of coronary heart disease.

**C** Physical education is under pressure in the UK – most schools devote little more than 100 minutes a week to it in curriculum time, which is less than many other European countries. Three European countries are giving children a head start in PE, France, Austria and Switzerland - offer at least two hours in primary and secondary schools. These findings, from the European Union of Physical Education Associations, prompted specialists in children's physiology to call on European governments to give youngsters a daily PE programme. The survey shows that the UK ranks 13th out of the 25 countries, with Ireland bottom, averaging under an hour a week for PE. From age six to 18, British children received, on average, 106 minutes of PE a week. Professor Armstrong, who presented the findings at the meeting, noted that since the introduction of the national curriculum there had been a marked fall in the time devoted to PE in UK schools, with only a minority of pupils getting two hours a week.

**D** As a former junior football international, Professor Armstrong is a passionate advocate for sport. Although the Government has poured millions into beefing up sport in the

community, there is less commitment to it as part of the crammed school curriculum. This means that many children never acquire the necessary skills to thrive in team games. If they are no good at them, they lose interest and establish an inactive pattern of behaviour. When this is coupled with a poor diet, it will lead inevitably to weight gain. Seventy per cent of British children give up all sport when they leave school, compared with only 20 per cent of French teenagers. Professor Armstrong believes that there is far too great an emphasis on team games at school. "We need to look at the time devoted to PE and balance it between individual and pair activities, such as aerobics and badminton, as well as team sports. "He added that children need to have the opportunity to take part in a wide variety of individual, partner and team sports.

**E** The good news, however, is that a few small companies and children's activity groups have reacted positively and creatively to the problem. Take That, shouts Gloria Thomas, striking a disco pose astride her mini-spacehopper. Take That, echo a flock of toddlers, adopting outrageous postures astride their space hoppers. 'Michael Jackson, she shouts, and they all do a spoof fan-crazed shriek. During the wild and chaotic hopper race across the studio floor, commands like this are issued and responded to with untrammelled glee. The sight of 15 bouncing seven-year-olds who seem about to launch into orbit at every bounce brings tears to the eyes. Uncoordinated, loud, excited and emotional, children provide raw comedy.

**F** Any cardiovascular exercise is a good option, and it doesn't necessarily have to be high intensity. It can be anything that gets your heart rate up: such as walking the dog, swimming, miming, skipping, hiking. "Even walking through the grocery store can be exercise," Samis-Smith said. What they don't know is that they're at a Fit Kids class, and that the fun is a disguise for the serious exercise plan they're covertly being taken through. Fit Kids trains parents to run fitness classes for children. 'Ninety per cent of children don't like team sports,' says company director, Gillian Gale.

**G** A prevention survey found that children whose parents keep in shape are much more likely to have healthy body weights themselves. "There's nothing worse than telling a child what he needs to do and not doing it yourself," says Elizabeth Ward, R.D., a Boston

nutritional consultant and author of *Healthy Foods, Healthy Kids*. "Set a good example and get your nutritional house in order first." In the 1930s and '40s, kids expended 800 calories a day just walking, carrying water, and doing other chores, notes Fima Lifshitz, M.D., a pediatric endocrinologist in Santa Barbara. "Now, kids in obese families are expending only 200 calories a day in physical activity," says Lifshitz, "incorporate more movement in your family's life: park farther away from the stores at the mall, take stairs instead of the elevator, and walk to nearby friends' houses instead of driving."

### **Questions 14 -17**

The reading Passage has seven paragraphs A-G.

Which paragraph contains the following information?

Write the correct letter A-G, in boxes 14-17 on your answer sheet.

- 14. Health and living condition of children
- 15. Health organization monitored physical activity
- 16. Comparison of exercise time between UK and other countries
- 17. Wrong approach for school activity

### **Questions 18-21**

Do the following statements agree with the information given in Reading Passage 2? In boxes 18-21 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

18. According to American Heart Foundation, cholesterol levels of boys are higher than girls'.

19. British children generally do less exercise than some other European countries.

20. Skipping becomes more and more popular in schools of UK.

21. According to Healthy Kids, the first task is for parents to encourage their children to keep the same healthy body weight.

### **Questions 22-26**

Choose the correct letter, A, B, C or D.

Write your answers in boxes 22-26 on your answer sheet.

22. According to paragraph A, what does Professor Neil Armstrong concern about?

A Spending more time on TV affect academic level

B Parents have less time stay with their children

C Future health of British children

D Increasing speed of property's development

23. What does Armstrong indicate in Paragraph B?

A We need to take a 10 minute walk everyday

B We should do more activity to exercise heart

C Girls' situation is better than boys

D Exercise can cure many disease

24. What is aim of First Kids' training?



- A Make profit by running several sessions
- B Only concentrate on one activity for each child
- C To guide parents how to organize activities for children
- D Spread the idea that team sport is better

25. What did Lifshitz suggest in the end of this passage?

- A Create opportunities to exercise your body
- B Taking elevator saves your time
- C Kids should spend more than 200 calories each day
- D We should never drive but walk

26. What is main idea of this passage?

- A health of the children who are overweight is at risk in the future
- B Children in UK need proper exercises
- C Government mistaken approach for children
- D Parents play the most important role in children's activity

### **SECTION 3**

You should spend about 20 minutes on Questions 27-40, which are based on Reading Passage 3 on the following pages.

#### **Mechanisms of Linguistic Change**

**A** The changes that have caused the most disagreement are those in pronunciation. We have various sources of evidence for the pronunciations of earlier times, such as the spellings, the treatment of words borrowed from other languages or borrowed by them, the descriptions of contemporary grammarians and spelling-reformers, and the modern pronunciations in all the languages and dialects concerned. From the middle of the sixteenth century, there are in England writers who attempt to describe the position of the speech-organs for the production of English phonemes, and who invent what are in effect systems of phonetic symbols. These various kinds of evidence, combined with a knowledge of the mechanisms of speech-production, can often give us a very good idea of the pronunciation of an earlier age, though absolute certainty is never possible.

**B** When we study the pronunciation of a language over any period of a few generations or more, we find there are always large-scale regularities in the changes: for example, over a certain period of time, just about all the long [a:] vowels in a language may change into long [e:] vowels, or all the [b] consonants in a certain position (for example at the end of a word) may change into [p] consonants. Such regular changes are often called sound laws. There are no universal sound laws (even though sound laws often reflect universal tendencies), but simply particular sound laws for one given language (or dialect) at one given period.

**C** It is also possible that fashion plays a part in the process of change. It certainly plays a part in the spread of change: one person imitates another, and people with the most prestige are most likely to be imitated, so that a change that takes place in one social group may be imitated (more or less accurately) by speakers in another group. When a social group goes up or down in the world, its pronunciation of Russian, which had formerly been considered desirable, became on the contrary an undesirable kind of accent to have, so that people tried to disguise it. Some of the changes in accepted English pronunciation in the seventeenth and eighteenth centuries have been shown to consist in the replacement of one style of pronunciation by another style already existing, and it is likely that such substitutions were a result of the great social changes of the period: the increased power and wealth of the middle classes, and their steady infiltration

upwards into the ranks of the landed gentry, probably carried elements of middle-class pronunciation into upper-class speech.

**D** A less specific variant of the argument is that the imitation of children is imperfect: they copy their parents' speech, but never reproduce it exactly. This is true, but it is also true that such deviations from adult speech are usually corrected in later childhood. Perhaps it is more significant that even adults show a certain amount of random variation in their pronunciation of a given phoneme, even if the phonetic context is kept unchanged. This, however, cannot explain changes in pronunciation unless it can be shown that there is some systematic trend in the failures of imitation: if they are merely random deviations they will cancel one another out and there will be no net change in the language.

**E** One such force which is often invoked is the principle of ease, or minimization of effort. The change from fussy to fuzzy would be an example of assimilation, which is a very common kind of change. Assimilation is the changing of a sound under the influence of a neighbouring one. For example, the word scant was once skamt, but the /m/ has been changed to /n/ under the influence of the following /t/. Greater efficiency has hereby been achieved, because /n/ and /t/ are articulated in the same place (with the tip of the tongue against the teeth-ridge), whereas /m/ is articulated elsewhere (with the two lips). So the place of articulation of the nasal consonant has been changed to conform with that of the following plosive. A more recent example of the same kind of thing is the common pronunciation of football as footbal.

**F** Assimilation is not the only way in which we change our pronunciation in order to increase efficiency. It is very common for consonants to be lost at the end of a word: in Middle English, word-final [-n] was often lost in unstressed syllables, so that baken 'to bake' changed from ['ba:kan] to ['ba:kʌ], and later to [ba:k]. Consonant-clusters are often simplified. At one time there was a [t] in words like castle and Christmas, and an initial [k] in words like knight and know. Sometimes a whole syllable is dropped out when two successive syllables begin with the same consonant (haplology): a recent example is temporary, which in Britain is often pronounced as if it were tempory.

### Questions 27-30

Complete the summary below.

Choose **NO MORE THAN THREE WORDS** from the passage for each answer.

Write your answers in boxes 27-30 on your answer sheet.

The pronunciation of living language undergo changes throughout thousands of years. Large scale regular changes are usually called 27\_\_\_\_\_. There are three reasons for these changes. Firstly, the influence of one language on another; when one person imitates another pronunciation (the most prestige's), the imitation always partly involving factor of 28\_\_\_\_\_. Secondly, the imitation of children from adults<sup>1</sup> language sometimes are 29\_\_\_\_\_, and may also contribute to this change if there are insignificant deviations though later they may be corrected. Finally, for those random variations in pronunciation, the deeper evidence lies in the 30\_\_\_\_\_ or minimization of effort.

### Questions 31-37

Do the following statements agree with the information given in Reading Passage 3? In boxes 31-37 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

31. it is impossible for modern people to find pronunciation of words in an earlier age

32. The great change of language in Russian history is related to the rising status and fortune of middle classes.

33. All the children learn speeches from adults while they assume that certain language is difficult to imitate exactly.

34. Pronunciation with causal inaccuracy will not exert big influence on language changes.

35. The link of can be influenced being pronounced as 'nf'

36. The [g] in gnat not being pronounced will not be spelt out in the future.

37. The sound of 'temporary' cannot wholly present its spelling.

### **Questions 38-40**

Look at the following sentences and the list of statements below. Match each statement with the correct sentence, A-D.

Write the correct letter, A-D, in boxes 38-40 on your answer sheet

A Since the speakers can pronounce it with less effort

B Assimilation of a sound under the influence of a neighbouring one

C It is a trend for changes in pronunciation in a large scale in a given period

D Because the speaker can pronounce [n] and [t] both in the same time

38. As a consequence, 'b' will be pronounced as

39. The pronunciation of [mt] changed to [nt]

40. The omit of 'f' in the sound of Christmas

## ANSWER KEYS

### Reading Test 1

1	C	2	A	3	D
4	A	5	B	6	A
7	B	8	E	3	G
10	NO	11	NOT GIVEN	12	NOT GIVEN
13	YES				
14	iii	15	vi	16	i
17	ii	18	ix	19	v
20	iv	21	( yellow – fever) epidemic	22	Finland
23	Governing institutions	24	Europe	25	Einkorn Wheat
26	Singapore				
27	D	28	C	29	B
30	B	31	C	32	B
33	E	34	D	35	F
36	NOT GIVEN	37	YES	38	YES
39	NO	40	NO		

### Reading Test 2

1	B	2	A	3	F
4	C	5	TRUE	6	NOT GIVEN
7	TRUE	8	FALSE	3	B
10	B	11	C	12	D
13	A				
14	Photographic Film	15	Bakelite	16	(electric) Switches
17	Britain/UK	18	Fireproof	19	Glass

20	Rigid Foams	21	FALSE	22	NOT GIVEN
23	FALSE	24	TRUE	25	TRUE
26	TRUE				
27	D	28	B	29	A
30	C	31	A	32	A
33	High tides	34	Agricultural production	35	Coastal boundaries
36	NOT GIVEN	37	NOT GIVEN	38	NO
39	YES	40	NO		

## Reading Test 3

1	NOT GIVEN	2	TRUE	3	TRUE
4	FALSE	5	D	6	E
7	C	8	D	3	B
10	D	11	D	12	C
13	B				
14	B	15	E	16	F
17	Essential element	18	Applications	19	Portable commodity
20	Taxes	21	Spirits	22	TRUE
23	NOT GIVEN	24	FALSE	25	FALSE
26	TRUE	27	TRUE		
28	A	29	B	30	C
31	B	32	D	33	E
34	F	35	H	36	C
37	YES	38	NO	39	YES
40	NOT GIVEN				

## Reading Test 4

1	v	2	i		vi
4	x	5	ix		iv
7	ii	8	True		True
10	Not given	11	C		D
13	E				
14	TRUE	15	NOT GIVEN	16	TRUE
17	TRUE	18	FALSE	19	TRUE
20	Extinction	21	Drugs, crops	22	Pioneers
23	Sir Joseph banks	24	Underground vaults	25	A
26	B				
27	D	28	A	29	G
30	B	31	H	32	F
33	A	34	D	35	C
36	FALSE	37	NOT GIVEN	38	TRUE
39	TRUE	40	FALSE		

## Reading Test 5

1	Ten thousand	2	South – East Asia	3	Hard seeds/ seeds
4	F	5	A	6	D
7	C	8	E	3	B
10	C	11	NOT GIVEN	12	FALSE
13	TRUE				
14	B	15	H	16	C
17	A	18	G	19	Cargo vessel
20	Luxury items	21	Gearwheel	22	Analog computer
23	C	24	B	25	B
26	A				
27	v	28	X	29	lii



30	i	31	Vii	32	Viii
33	ii	34	C	35	B
36	E	37	A	38	D
39	C	40	D		

## Reading Test 6

1	B	2	B	3	D
4	D	5	B	6	ferry
7	Bicycle	8	Fan/ceiling fan	9	Air conditioner
10	Mosquitos/ mosquito	11	A	12	C
13	E				
14	NOT GIVEN	15	FALSE	16	TRUE
17	FALSE	18	FALSE	19	F
20	B	21	G	22	C
23	H	24	B	25	D
26	A				

27	Vi	28	iv	29	ii
30	V	31	vii	32	F
33	B	34	E	35	D
36	G	37	A	38	C
39	B	40	C		

## Reading Test 7

1	Spread	2	Rain/rainfall	3	Climate change
4	10 times	5	Primary Fuel	6	Fire Season
7	C	8	B	9	D
10	True	11	Not Given	12	True
13	False				
14	True	15	False	16	True

17	Not Given	18	True	19	Not Given
20	1976 and 1995	21	2000 floods	22	France
23	1956	24	1998 and 2002	25	1990
26	500	27	D		

28	False	29	True	30	True
31	Not Given	32	False	33	Not Given
34	True	35	History of Childhood	36	(as) miniature adults
37	(with the) industrialization	38	The factory act	39	Play and education
40	Classroom				

## Reading Test 8

1	NOT GIVEN	2	FALSE	3	NOT GIVEN
4	TRUE	5	Evergreen	6	Natural pesticides
7	Power	8	Overnight	9	Neem cake
10	Doubles	11	Nitrogen	12	2000
13	Neem seeds	14	Water purification		
15	Identical	16	Balls of paper	17	Count/ Calculate eggs
18	fruits flies	18	Mosquito fish	20	Surface area
21	sugar water	22	TRUE	23	FALSE
24	NOT GIVEN	25	TRUE	26	NOT GIVEN
27	TRUE				
28	F	29	I	30	C
31	B	32	G	33	C
34	B	35	A	36	YES
37	YES	38	NO	39	NOT GIVEN
40	NO				

## Reading Test 9

1	D	2	B	3	C
4	A	5	YES	6	NO
7	NOT GIVEN	8	YES	3	NO
10	Farming	11	Curry	12	Natural/ organic
13	Chemical				
14	A	15	E	16	F
17	C	18	B	19	J
20	K	21	F	22	C
23	D	24	TRUE	25	FALSE
26	TRUE	27	NOT GIVEN		
28	F	29	E	30	C
31	B	32	G	33	D
34	A	35	C	36	A
37	D	38	B	39	B
40	D				

## Reading Test 10

1	B	2	C	3	D
4	TRUE	5	FALSE	6	TRUE
7	FALSE	8	NOT GIVEN	9	TRUE
10	TRUE	11	B	12	D
13	F				
14	A	15	B	16	C
17	D	18	NOT GIVEN	19	TRUE
20	NOT GIVEN	21	FALSE	22	C
23	B	24	C	25	A
26	B	27	Sound laws		
28	Fashion	29	Imperfect	30	Principle

31	False	32	False	33	Not Given
34	True	35	True	36	Not Given
37	True	38	C	39	B
40	A				