Foot Pedal Irrigation

A Until now, governments and development agencies have tried to tackle the problem through large-scale projects: gigantic dams, sprawling irrigation canals and vast new fields of high-yield crops introduced during the Green Revolution, the famous campaign to increase grain harvests in developing nations. Traditional irrigation, however, has degraded the soil in many areas, and the reservoirs behind dams can quickly fill up with silt, reducing their storage capacity and depriving downstream farmers of fertile sediments. Furthermore, although the Green Revolution has greatly expanded worldwide farm production since 1950, poverty stubbornly persists in Africa, Asia and Latin America. Continued improvements in the productivity of large farms may play the main role in boosting food supply, but local efforts to provide cheap, individual irrigation systems to small farms may offer a better way to lift people out of poverty.

B The Green Revolution was designed to increase the overall food supply, not to raise the incomes of the rural poor, so it should be no surprise that it did not eradicate poverty or hunger. India, for example, has been self-sufficient in food for 15 years, and its granaries are full, but more than 200 million Indians----one fifth of the country's population----are malnourished because they cannot afford the food they need and because the country's safety nets are deficient. In 2000 189 nations committed to the Millennium Development Goals, which called for cutting world poverty in half by 2015. With business as usual, however, we have little hope of achieving most of the Millennium goals, no matter how much money rich countries contribute to poor ones. (This test is offered by IELTS break up master, www.ysfsds.com)

C The supply-driven strategies of the Green Revolution, however, may not help subsistence farmers, who must play to their strengths to compete in the global marketplace. The average size of a family farm is less than four acres in India, 1.8 acres in Bangladesh and about half an acre in China. Combines and other modern farming tools are too expensive to be used on such small areas. An Indian farmer selling surplus wheat grown on his one-acre plot could not possibly compete with the highly efficient and subsidized Canadian wheat farms that typically stretch over thousands of acres. Instead subsistence farmers should exploit the fact that their labor costs are the lowest in the world, giving them a comparative advantage in growing and selling high-value, intensely farmed crops.

D Paul Polak saw firsthand the need for a small-scale strategy in 1981 when he met Abdul Rahman, a farmer in the Noakhali district of Bangladesh. From his three quarter-acre plots of rain-fed rice fields, Abdul could grow only 700 kilograms of rice each year---300 kilograms less than what he needed to feed his family. During the three months before the October rice harvest came in, Abdul and his wife had to watch silently while their three children survived on one meal a day or less. As Polak walked with him through the scattered fields he had inherited from his father, Polak asked what he needed to move out of poverty. “Control of water for my crops,” he said, “at a price I can afford.”

E Soon Polak learned about a simple device that could help Abdul achieve his goal: the treadle pump. Developed in the late 1970s by Norwegian engineer Gunnar Barnes, the pump is operated by a person walking in place on a pair of treadles and two handle arms made of bamboo.

Properly adjusted and maintained, it can be operated several hours a day without tiring the users. Each treadle pump has two cylinders which are made of engineering plastic. The diameter of a cylinder is 100.5mm and the height is 280mm. The pump is capable of working up to a maximum depth of 7 meters. Operation beyond 7 meters is not recommended to preserve the integrity of the rubber components. The pump mechanism has piston and foot valve assemblies. The treadle action creates alternate strokes in the two pistons that lift the water in pulses.

F The human-powered pump can irrigate half an acre of vegetables and costs only $25 (including the expense of drilling a tube well down to the groundwater). Abdul heard about the treadle pump from a cousin and was one of the first farmers in Bangladesh to buy one. He borrowed the $25 from an uncle and easily repaid the loan four months later. During the five-month dry season, when Bangladeshis typically farm very little, Abdul used the treadle pump to grow a quarter-acre of chili peppers, tomatoes, cabbage and eggplants. He also improved the yield of one of his rice plots by irrigating it. His family ate some of the vegetables and sold the rest at the village market, earning a net profit of $100. With his new income, Abdul was able to buy rice for his family to eat, keep his two sons in school until they were 16 and set aside a little money for his daughter's dowry. When Polak visited him again in 1984, he had doubled the size of his vegetable plot and replaced the thatched roof on his house with corrugated tin. His family was raising a calf and some chickens. He told me that the treadle pump was a gift from God.

G Bangladesh is particularly well suited for the treadle pump because a huge reservoir of groundwater lies just a few meters below the farmers' feet. In the early 1980s IDE initiated a campaign to market the pump, encouraging 75 small private-sector companies to manufacture the devices and several thousand village dealers and tube-well drillers to sell and install them. Over the next 12 years one and a half million farm families purchased treadle pumps, which increased the farmers' net income by a total of $150 million a year. The cost of IDE's market-creation activities was only $12 million, leveraged by the investment of $37.5 million from the farmers themselves. In contrast, the expense of building a conventional dam and canal system to irrigate an equivalent area of farmland would be in the range of $2,000 per acre, or $1.5 billion. (This test is offered by IELTS break up master, www.ysfsds.com)

Questions 1-6

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

In boxes 1-6 on your answer sheet, write

TRUE *if the statement agrees with the information*
FALSE *if the statement contradicts with the information*
NOT GIVEN *if there is no information on this*

1 It is more effective to resolve poverty or food problem in large scale rather than in small scale.

2 Construction of gigantic dams costs more time in developing countries.

3 Green revolution failed to increase global crop production from the mid of 20th century.

4 Agricultural production in Bangladash declined in last decade.

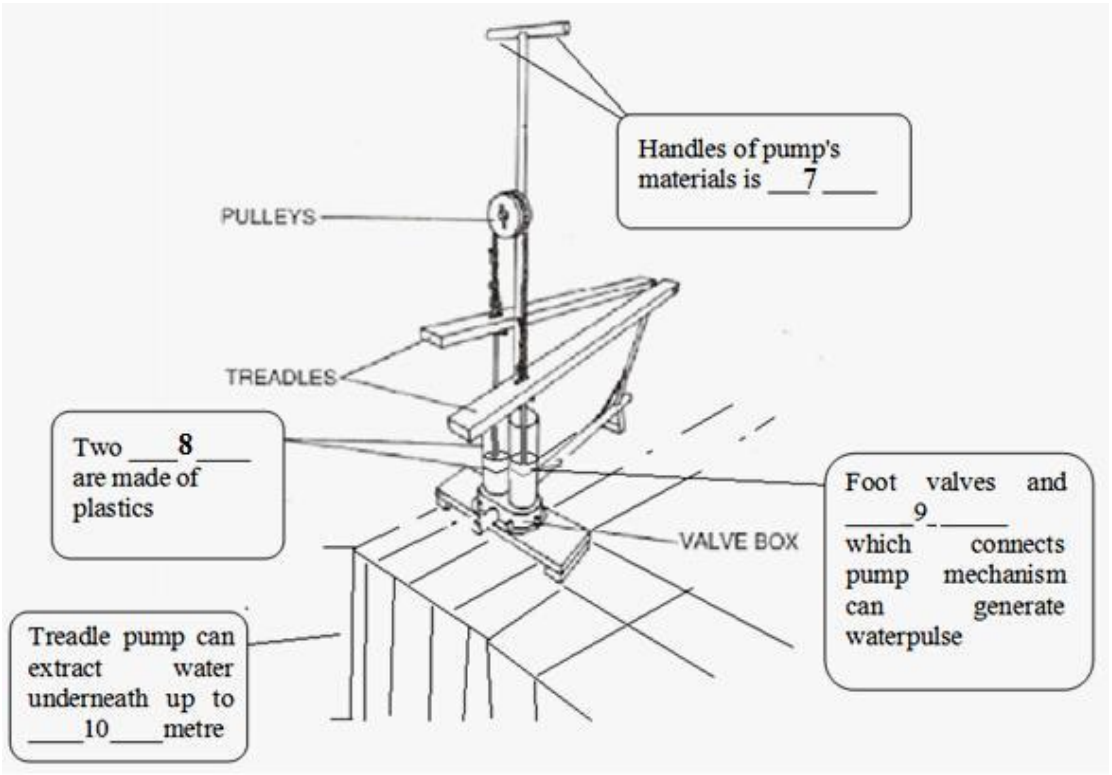
5 Farmer Abdul Rahman knew how to increase production himself.

6 Small pump spread into big project in Bangladesh in the past decade.

Questions 7-10

Filling the blanks in diagram of treadle pump's each parts.

Choose ***NO MORE THAN THREE WORDS AND/OR A NUMBER*** from the passage for each answer.



Questions 11-13

Answer the questions below.

Choose NO MORE THAN THREE WORDS AND/OR A NUMBER from the passage for each answer.

11 How large area can a treadle pump irrigate the field at a low level of expense?

12 What is Abdul's new roof made of ?

13 How much did Bangladesh farmers invest by IDE's stimulation?

Foot Pedal Irrigation

FALSE	**NOT GIVEN**	**FALSE**	**NOT GIVEN**	**TRUE**
TRUE	**bamboo**	**cylinders**	**piston**	**7**
half an acre	**corrugated tin**	**$37.5 million**		

Amateur Naturalists

It is not only scientists at universities, rainforests, and museums that make significant

contributions to our knowledge of the natural world. Ordinary people could do their bit to science. Historically, and in modern times, many amateur naturalists, people who earn livings in fields outside natural history, have become recognized experts in the study of many aspects.

A Tim Sparks slides a small leather-bound notebook out of an envelope. The book's yellowing pages contain beekeeping notes made between 1941 and 1969 by Waiter Coates of Kilworth, Leicestershire. He adds it to his growing pile of local journals, birdwatchers' lists and gardening diaries. "We're uncovering about one major new record each month," he says, "I still get surprised" Around two centuries before Coates, Robert Marsham, a landowner from Norfolk in the east of England, began recording the life cycles of plants and animals on his estate-when the first wood anemones flowered, the dates on which the oaks burst into leaf and the rooks began nesting. Successive Marshams continued compiling these notes for 211 years.

B Today, such records are being put to uses that their authors could not possibly have expected. These data sets, and others like them, are proving invaluable to ecologists interested in the timing of biological events, or phenology. By combining the records with climate data, researchers can reveal how, for example, changes in temperature affect the arrival of spring allowing ecologists to make improved predictions about the impact of climate change. A small band of researchers is combing through hundreds of years of records taken by thousands of amateur naturalists. And more systematic projects have also started up, producing an overwhelming response. "The amount of interest is almost frightening" says Sparks, a climate researcher at the Centre for Ecology and Hydrology in Monks Wood, Cambridgeshire.

C Sparks became aware of the army of "closet phenologists", as he describes them, when a retiring colleague gave him the Marsham records. He now spends much of his time following leads from one historical data set to another. As news of his quest spreads, people tip him off to other historical records, and more amateur phenologists come out of their closets. The British devotion to recording and collecting makes his job easier-one man from: Kent sent him 30 years' worth of kitchen calendar on which he had noted the date that his neighbours' magnolia tree flowered. (This test is offered by IELTS break up master, www.ysfsds.com)

D Other researchers have unearthed data from equally odd sources. Rafe Sargarin, an ecologist at Stanford University in California, recently studied records of a betting contest in which participants attempt to guess the exact time at which a specially erected wooden tripod will fall through the surface of a thawing river. The competition has taken place annually on the Tenana River in Alaska since 1917, and analysis of the results showed that the thaw now arrives five days earlier than it did when the contest began.

E Overall, Such records have helped to show that, compared with 20 years ago, a raft of natural events now occur earlier across much of the northern hemisphere, from the opening of leaves to the return of birds from migration and the emergence of butterflies from hibernation. The data can also hint at how nature will change in the future. Together with models of climate change, amateurs' records could help guide conservation. Terry Root, an ecologist at the University of Michigan in Ann Arbor, has collected birdwatchers' counts of wildfowl taken between 1955 and

1996 on seasonal ponds in the American Midwest and combined them with climate data and models of future warming. Her analysis shows that the increased droughts that the models predict could halve the breeding populations at the ponds. “The number of waterfowl in North America will most probably drop significantly with global warming,” she says. (This test is offered by IELTS break up master, www.ysfsds.com)

F But not all professionals are happy to use amateur data. “A lot of scientists won’t touch them, they say they’re too full of problems.” says Root. Because different observers can have different ideas of what constitutes, for example, an open snowdrop. “The biggest concern with ad hoc observations is how carefully and systematically they were taken,” says Mark Schwartz of the University of Wisconsin, Milwaukee, who studies the interactions between plants and climate. “We need to know pretty precisely what a person’s been observing-if they just say ‘I noted when the leaves came out’, it might not be that useful,” Measuring the onset of autumn can be particularly problematic because deciding when leaves change colour is a more subjective process than noting when they appear.

G Overall, most phenologists are positive about the contribution that amateurs can make. “They get at the raw power of science: careful observation of the natural world,” says Sagarin. But the professionals also acknowledge the need for careful quality control. Root, for example, tries to gauge the quality of an amateur archive by interviewing its collector. “You always have to worry things as trivial as vacations can affect measurement. I disregard a lot of records because they’re not rigorous enough,” she says. Others suggest that the right statistics can iron out some of the problems with amateur data. Together with colleagues at Wageningen University in the Netherlands, environmental scientist Arnold van Vliet is developing statistical techniques to account for the uncertainty in amateur phenological data. With the enthusiasm of amateur phenologists evident from past records, professional researchers are now trying to create standardized recording schemes for future efforts. They hope that well-designed studies will generate a volume of observations: large enough to drown out the idiosyncrasies of individual recorders. The data are cheap to collect, and can provide breadth in space, time and range of species. “It’s very difficult to collect data on a large geographical scale without enlisting an army of observers,” says Root.

H Phenology also helps to drive home messages about climate change. “Because the public understand these records, they accept them,” says Sparks. It can also illustrate potentially unpleasant consequences, he adds, such as the finding that more rat infestations are reported To local councils in warmer years. And getting people involved is great for public relations. “People are thrilled to think that the data they’ve been collecting as a hobby can be used for something scientific-it empowers them” says Root.

Questions 1-14

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

1 definition of phenology was introduced

2 the first noticed amateur record of a researcher was by Sparks

3 surprising benefits of casual science statistic

4 unable to complete the mission without enormous amateur data collection

5 example of using amateur records for a scientific anticipation

6 records from an amateur contributed to research about climate change

7 collection of old records compiled by a family of amateur naturalists

Questions 8-10

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

8 In Waiter Coates' s records, plenty of materials about ____are available.

9 Robert Marsham is notable for collecting animals and plants' _____.

10 The number of waterfowls in North America decreases because of increased _____ according to some phenologists.

Questions 11-14

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

11 Why do a lot of scientists question the amateur' s data?

A Data collection is not professional.

B Amateur observers are easily distracted.

C Amateur data is not reliable sometimes.

D They have one-sided work experience.

12 Example of leaves used by Mark Schwartz intends to illustrate that

A the observers did not know how to note data.

B accurate information is valuable.

C some details are very difficult to notice.

D amateur records are not well organized.

13 What are suggestions given by scientist for using amateur data?

A Use modified and better approaches.

B 0nly amateur observation data is valuable.

C Use original materials instead of changed ones.

D Method of data collection is the most important.

14 What is the implication of phenology brought to ordinary people?

A It arouses public awareness about climate change.

B It enhances the relations between ordinary people and scientists.

C It encourages people to collect more animal information.

D It enables people to be knowledgeable and professional.

Amateur Naturalists

B	**C**	**H**	**G**	**E**

D	**A**	**beekeeping**	**life cycle**	**drought**
C	**B**	**A**	**A**	

Consecutive and Simultaneous Translation

A When people are faced with a foreign-language barrier,the usual way round it is to find someone to interpret or translate for them. The term ‘translation’, is the neutral term used for all tasks where the meaning or expressions in one language (the source language) is turned into the meaning of another (the ‘target’ language), whether the medium is spoken, written, or signed. In specific professional contexts, however, a distinction is drawn between people who work with the spoken or signed language (interpreters), and those who work with the written language (translators). (This test is offered by IELTS break up master, www.ysfsds.com)

B Interpreting is today widely known from its use in international political life. When senior ministers from different language backgrounds meet, the television record invariably shows a pair of interpreters hovering in the background at major conferences, such as the United Nations General Assembly, the presence of headphones is a clear indication that a major linguistic exercise is taking place. In everyday circumstances, too, interpreters are frequently needed, especially in cosmopolitan societies formed by new reiterations of immigrants and Gastarbeiter.

C There are two main kinds of oral translation—consecutive and simultaneous. In consecutive translation the translating starts after the original speech or some part of it has been completed. Here the interpreter’s strategy and the final results depend, to a great extent on the length of the segment to be translated. If the segment is just a sentence or two the interpreter closely follows the original speech. As often as not, however, the interpreter is expected to translate a long speech which has lasted for scores of minutes or even longer. In this case he has to remember a great number of messages; and keep them in mind until he begins his translation. To make this possible the interpreter has to take notes of the original messages, various systems of notation having been suggested for the purpose. The study of, and practice in, such notation is the integral part of the interpreter’s training as are special exercises to develop his memory.

D Doubtless the recency of developments in the field partly explains this neglect. One procedure, consecutive interpreting, is very old—and presumably dates from the Tower of Babel! Here, the interpreter translates after the speaker has finished speaking. This approach is widely practiced in informal situations, as well as in committees and small conferences. In larger and more formal settings, however, it has been generally replaced by simultaneous interpreting — a recent development that arose from the availability of modern audiological equipment and the advent of increased international interaction following the Second World War.

E Of the two procedures, it is the second that has attracted most interest, because of the complexity of the task and the remarkable skills required. In no other context of human communication is anyone routinely required to listen and speak at the same time, preserving an exact semantic correspondence between the two modes. Moreover, there is invariably a delay of a few words between the stimulus and the response, because of the time it takes to assimilate

what is being said in the source language and to translate it into an acceptable form in the target language. This ‘ear-voice span’ is usually about 2 or 3 seconds, but it may be as much as 10 seconds or so, if the text is complex. The brain has to remember what has just been said, attend to what is currently being said, and anticipate the construction of what is about to be said. As you start a sentence you are taking a leap in the dark, you are mortgaging your grammatical future; the original sentence may suddenly be turned in such a way that your translation of its end cannot easily be reconciled with your translation of its start. Great nimbleness is called for. (This test is offered by IELTS break up master, www.ysfsds.com)

F How it is all done is not at all clear. That it is done at all is a source of some wonden given the often lengthy periods of interpreting required， the confined environment of an interpreting booth, the presence of background noise, and the awareness that major decisions may depend upon the accuracy of the work. Other consideration such as cultural background also makes it aim to pay full attention to the backgrounds of the authors and the recipients, and to take into account differences between source and target language.

G Research projects have now begun to look at these factors—to determine, for example, how far successful interpreting is affected by poor listening conditions, or the speed at which the source language is spoken. It seems that an input speed of between 100 and 120 words per minute is a comfortable rate for interpreting, with an upper limit of around 200 w.p.m. But even small increases in speed can dramatically affect the accuracy of output. In one controlled study, when speeds were gradually increased in a series of stages from 95 to 164 w.p.m., the ear-voice span also increased with each stage, and the amount correctly interpreted showed a clear decline. Also, as the translating load increases, not only are there more errors of commission (mistranslations, cases of vagueness replacing precision), there are also more errors of omission, as words and segments of meaning are filtered out. These are important findings, given the need for accuracy in international communication.

Questions 1-5

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

1 In which way does author state translation at the beginning of the passage?

A Abstract and concrete meaning.

B General and specific meaning.

C Several examples of translation’s meaning.

D Different meaning in various profession.

2 Application of headphone in a UN conference tells as that:

A TV show is being conducted.

B radio program is on air.

C two sides are debating.

D language practice is in the process.

3 In the passage, what is author’ s purpose of citing Tower of Babel?

A Interpreting secret is stored in the Tower.

B Interpreter emerged exactly from time of Tower of Babel.

C Consecutive interpreting has a long history.

D Consecutive interpreting should be abandoned.

4 About simultaneous interpreting, which of the following is TRUE?

A It is an old and disposable interpretation method.

B It needs no outstanding professional ability.

C It relies on professional equipment.

D It needs less than two seconds ear-voice span.

5 In consecutive translation, if the section is longer than expected, what would an interpreter do?

A He or she has to remember some parts ahead.

B He or she has to break the section first.

C He or she has to respond as quickly as possible.

D He or she has to remember all parts ahead.

Questions 6-10

*Complete the following summary of the paragraphs of Reading Passage 1, using **NO MORE THAN TWO WORDS** or numbers from Reading Passage for each answer.*

In simultaneous interpreting, the delay between receipt and the response called ear to voice. It normally lasts about 6_____, which depends on sophistication of source language, for example, it could go up to 7_____occasionally. When expert took close research on affecting elements, they found appropriate speaking speed is a scope among 8_____w.p.m. However, the maximum of speed was roughly 9_____w.p.m. In a specific experiment, ear-voice span speed increased between 10_____,the accuracy of interpretation dropped.

Questions 11-14

Choose ***FOUR*** correct letters for the question.

Which FOUR of the followings are the factors that affect interpreting?

A structure of sentence in the script

B speed of incoming voice

C noisy of background

D states of interpreter

E culture of different background

F equipment of scene

G volume of speaker

Consecutive and Simultaneous Translation

B	**D**	**C**	**C**	**A**
2-3 seconds	**10 seconds**	**100-120**	**95-164**	**B**
C	**E**	**F**		

Classifying societies

Although humans have established many types of societies throughout history, sociologists and anthropologists tend to classify different societies according to the degree to which different groups within a society have unequal access to advantages such as resources, prestige or power, and usually refer to four basic types of societies. From least to most socially complex they are clans, tribes, chiefdoms and states.

Clan

These are small-scale societies of hunters and gatherers, generally of fewer than 100 people, who move seasonally to exploit wild (undomesticated) food resources. Most surviving-hunter-gatherer groups are of this kind, such as the Hadza of Tanzania or the San of southern Africa. Clan members are generally kinsfolk, related by descent or marriage. Clans lack formal leaders, so there are no marked economic differences or disparities in status among their members. (This test is offered by IELTS break up master, www.ysfsds.com)

Because clans are posed of mobile groups of hunter-gatherers, their sites consist mainly of seasonally occupied camps, and other smaller and more specialized sites. Among the latter are kill or butchery sites—locations where large mammals are killed and sometimes butchered—and work sites, where tools are made or other specific activities carried out. The base camp of such a group may give evidence of rather insubstantial dwellings or temporary shelters, along with the debris of residential occupation.

Tribe

These are generally larger than mobile hunter-gatherer groups, but rarely number more than a few thousand, and their diet or subsistence is based largely on cultivated plants and domesticated animals. Typically, they are settled farmers, but they may be nomadic with a very different, mobile economy based on the intensive exploitation of livestock. These are generally multi-munity societies, with the individual munities integrated into the larger society through kinship ties. Although some tribes have officials and even a “capital” or seat of government, such officials lack the economic base necessary for effective use of power.

The typical settlement pattern for tribes is one of settled agricultural homesteads or villages. Characteristically, no one settlement dominates any of the others in the region. Instead, the archaeologist finds evidence for isolated, permanently occupied houses or for permanent villages. Such villages may be made up of a collection of free-standing houses, like those of the first farms of the Danube valley in Europe. Or they may be clusters of buildings grouped together, for example, the pueblos of the American Southwest, and the early farming village or small town of Çatalhöyük in modern Turkey.

Chiefdom

These operate on the principle of ranking—differences in social status between people. Different lineages (a lineage is a group claiming descent from a common ancestor) are graded on a scale of prestige, and the senior lineage, and hence the society as a whole, is governed by a chief. Prestige and rank are determined by how closely related one is to the chief, and there is no true

stratification into classes. The role of the chief is crucial.

Often, there is local specialization in craft products, and surpluses of these and of foodstuffs are periodically paid as obligation to the chief. He uses these to maintain his retainers, and may use them for redistribution to his subjects. The chiefdom generally has a center of power, often with temples, residences of the chief and his retainers, and craft specialists. Chiefdoms vary greatly in size, but the range is generally between about 5000 and 20,000 persons.

Early State

These preserve many of the features of chiefdoms, but the ruler (perhaps a king or sometimes a queen) has explicit authority to establish laws and also to enforce them by the use of a standing army. Society no longer depends totally upon kin relationships: it is now stratified into different classes. Agricultural workers and the poorer urban dwellers form the lowest classes, with the craft specialists above, and the priests and kinsfolk of the ruler higher still. The functions of the ruler are often separated from those of the priest: palace is distinguished from temple. The society is viewed as a territory owned by the ruling lineage and populated by tenants who have an obligation to pay taxes. The central capital houses a bureaucratic administration of officials; one of their principal purposes is to collect revenue (often in the form of taxes and tolls) and distribute it to government, army and craft specialists. Many early states developed complex redistribution systems to support these essential services.

This rather simple social typology, set out by Elman Service and elaborated by William Sanders and Joseph Marino, can be criticized, and it should not be used unthinkingly. Nevertheless, if we are seeking to talk about early societies, we must use words and hence concepts to do so. Service's categories provide a good framework to help organize our thoughts.

Questions 1-7

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts with the information*
NOT GIVEN	*if there is no information on this*

1 Little economic difference could be found between clan members.

2 There are a wide range of plants that grew by the farmers of a tribe.

3 One settlement is the most important in a tribe.

4 How much land a person owns determines his status.

5 People craft goods in chiefdoms.

6 The king uses military force to maintain the order of a state.

7 Bureaucratic officers receive higher salaries than other members.

Questions 8-13

*Choose **No More Than Two Words** from the passage 1 for each answer.*

8 What are carried out at the clan work sites?

9 Besides settle farming, what is the other way of life for tribes?

10 What is the arrangement of Çatalhöyük's housing units?

11 What does a chief reward his subjects apart from giving crafted goods?

12 What is the smallest possible population of a chiefdom?

13 Which group of people is at the bottom of an early state but higher than the farmers?

Classifying societies

TRUE	**NOT GIVEN**	**FALSE**	**FALSE**	**TRUE**
TRUE	**NOT GIVEN**	**tools**	**Nomadic**	**grouped**
foodstuffs	**20,000**	**craft specialists**		

Reading passage 3 has seven paragraphs, A-G.

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

List of Headings

i An initiative of CSR even without financial rewards

ii Tight combination of overall business strategy and CRS

iii Business expansion benefited from CSR

iv Lack of action by the state of social issues

v Drives or pressures to take CSR into practice

vi The consequence suffered by companies that failed to anticipate the social influence

vii Companies applying CSR should be selective

viii Mutually beneficial relationship between business and society

28 Paragraph A

29 Paragraph B

30 Paragraph C

31 Paragraph D

32 Paragraph E

33 Paragraph F

34 Paragraph G

Scent of Success

There are hundreds of ways and elements that contribute to the success of a business entity: some may benefit from the technology, others may own committed and loyal employees. Besides, we should never ignore the power of innovation. Many innovations end up as lemons-OzKleen turned lemons into a winning formula.

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 Keamey, 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 bathroom 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 70% 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 recipe is in a vault somewhere and in my head,” he says. The company is the 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 750 ml bottles after the constant “raves” from customers at their retail store at Beenleigh, near Brisbane. Customers were travelling 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 $3,000. “We were over the moon,” says OzKleen’s financial controller, Belinda McDonnell. (This test is offered by IELTS break up master, www.ysfsds.com)

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 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 cashflow 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 grand 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 1-6

*Reading Passage 1 has seven paragraphs **A-G.***

Which paragraph contains the following information?

1 an account of the creation process of new formula

2 an account of acquiring the original OzKleen company

3 a list of some innovative concepts

4 description of one family member talking another into selling cleaning products

5 an account of Shower Power’s European expansion

6 description of collaboration of all staff to meet the market demand

Questions 7-10

Look at the following people and list if statements below. Match each person with the correct statement. Write the correct letter, A-E, in boxes 7-10

7 Tom Quinn

8 Grant Keamey

9 Peter Quinn

10 Belinda Mc Donnell

List of Statements
A Believes new products like Shower Power may incur risks.
B Told his own story of selling Shower Power to a chain store.
C Says business won’t succeed with innovations.
D Insists that innovation cannot be achieved without essential support.
E Explained that there was a lack of fund when sales volume increased.

Questions 11-13

Choose the correct letter, A, B, C or D. Write your answers in boxes 11-13 on your answer sheet.

11 Chemists of OzKleen wanted to upgrade the formula because

A the original formula sent out a strange smell.

B the bulk-selling strategy didn’t work well.

C OzKleen wanted to earn more market share.

D they preferred an environmentally friendly product.

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

A appealing to supermarkets.

B popular in international market.

C attractive to individual customers.

D easier to package and transport.

13 Why did Tom Quinn decide to decline all the offers?

A The price offered was far from his expectation.

B He was satisfied with current situation.

C The company was at its heyday.

D New products were being developed in OzKleen.

Scent of Success

C	B	A	F	G
E	B	D	A	E
D	C	B		

The Power of Placebo

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. Encourage your patients to take an active part in their 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 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 a 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 lends itself to experimental study. Here, attention has turned to the endorphin, 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 endorphin, 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, here placed 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 Asproor 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 skeptical 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."

G 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 1-5

*Use the information in the passage to match the deed (listed **A-H**) with people below.*

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 lenghth 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

1 An alternative practitioner's description of treatment

2 An alternative practitioner who has faith in what he does

3 The illness of patients convinced of alternative practice

4 Improvements of patients receiving alternative practice

5 Conventional medical doctors

Questions 6-8

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

6 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.

7 Research on pain control attracts most of the attention because

A scientists have discovered that endorphins can help 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.

8 Fabrizio Benedetti’s research on endorphins indicates that

A they are widely used to regulate pain.

B they can be produced by willful thoughts.

C they can be neutralized by introducing naloxone.

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

Questions 9-13

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

TRUE	*If the statement agrees with the information*
FALSE	*If the statement contradicts the information*
NOT GIVEN	*If there is no information on this*

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

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

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

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

13 Alternative practitioners are seldom known for applying placebo effect.

A	**G**	**B**	**H**	**F**
A	**D**	**C**	**FALSE**	**NOT GIVEN**
TRUE	**TRUE**	**FALSE**		

Animal Minds: Parrot Alex

A In 1977 Irene Pepperberg, a recent graduate of Harvard University, did something very bold. At a time when animals still were considered automatons, she set out to find what was on another Creature’s mind by talking to it. She brought a one-year-old African gray parrot she named Alex

into her lab to teach him to reproduce the sounds of the English language. “I thought if he learned to communicate, I could ask him questions about how he sees the world.”

B When Pepperberg began her dialogue with Alex, who died last September at the age of 31, many scientists believed animals were incapable of any thought. They were simply machines, robots programmed to react to stimuli but lacking the ability to think or feel. Any pet owner would disagree. We see the love in our dogs’ eyes and know that, of course, they have thoughts and emotions. But such claims remain highly controversial. Gut instinct is not science, and it is all too easy to project human thoughts and feelings onto any other creature. How, then, does a scientist prove that an animal is capable of thinking-that it is able to acquire information about the world and act on it? “That’s why I started my studies with Alex,” Pepperberg said. They were seated-she at her desk, he on top of his cage---in her lab, a windowless room about the size of a boxcar, at Brandeis University. Newspapers lined the floor; baskets of bright toys were stacked on the shelves. They were clearly a team, and because of their work, the notion that animals can think is no longer so fanciful.

C Certain skills are considered key signs of higher mental abilities: good memory, a grasp of grammar and symbols, self-awareness, understanding others’ motives, imitating others, and being creative. Bit by bit, in ingenious experiments, researchers have documented these talents in other species, gradually chipping away at what we thought made human beings distinctive while offering a glimpse of where our own abilities came from. Scrub jays know that other jays are thieves and that stashed food can spoil; sheep can recognize faces; chimpanzees use a variety of tools to probe termite mounds and even use weapons to hunt small mammals. And Alex the parrot turned out to be a surprisingly good talker.

D Thirty years after the Alex’s studies began, Pepperberg and a changing collection of assistants were still giving him English lessons. The humans, along with two younger parrots, also served as Alex's flock, providing the social input all parrots crave. Like any flock, this one-as small as it was-had its share of drama. Alex dominated his fellow parrots., acted huffy at times around Pepperberg, tolerated the other female humans, and fell to pieces over a male assistant who dropped by for a visit. Pepperberg bought Alex in a Chicago pet store where she let the store’s assistant pick him out because she didn’t want other scientists saying later that she'd particularly chosen an especially smart bird for her work. Given that Alex’s brain was the size of a shelled walnut, most researchers thought Pepperberg’s interspecies communication study would be futile.

E “Some people actually called me crazy for trying this,” she said. “Scientists thought that chimpanzees were better subjects, although，of course，chimps can’t speak.” Chimpanzees, bonobos, and gorillas have been taught to use sign language and symbols to communicate with us, often with impressive results. The bonobo Kanzi, for instance, carries his symbol-communication board with him so he can “talk” to his human researchers, and he has invented combinations of symbols to express his thoughts. Nevertheless, this is not the same thing as having an animal look up at you, open his mouth, and speak. Under Pepperberg’s patient tutelage, Alex learned how to use his vocal tract to imitate almost one hundred English words, including the sounds for various foods. Although he calls an apple a “banerry”. “Apples taste a little bit like bananas to him, and they look a little bit like cherries, so Alex made up that word for them.” Pepperberg said.

F It sounded a bit mad, the idea of a bird having lessons to practice, and willingly doing it. But

after listening to and observing Alex, it was difficult to argue with Pepperberg’s explanation for his behaviors. She wasn’t handing him treats for the repetitious work or rapping him on the claws to make him say the sounds. “He has to hear the words over and over before he can correctly imitate them,” Pepperberg said, after pronouncing “seven” for Alex a good dozen times in a row. “I’m not trying to see if Alex can learn a human language,” she added. “That’s never been the point. My plan always was to use his imitative skills to get a better understanding of avian cognition ”.

G In other words, because Alex was able to produce a close approximation of the sounds of some English words, Pepperberg could ask him questions about a bird’s basic understanding of the world. She couldn’t ask him what he was thinking about, but she could ask him about his knowledge of numbers, shapes, and colors. To demonstrate, Pepperberg carried Alex on her arm to a tall wooden perch in the middle of the room. She then retrieved a green key and a small green cup from a basket on a shelf. She held up the two items to Alex's eye. “What's same?” she asked. Without hesitation, Alex’s beak opened “co-lor” “What’s different?” Pepperberg asked. “Shape,” Alex said. Although his voice had the digitized sound of a cartoon character, the words and the thoughts were entirely his.

H For the next 20 minutes, Alex ran through his tests, distinguishing colors, shapes, sizes, and materials (wool versus wood versus metal). He did some simple arithmetic, such as counting the yellow toy blocks among a pile of mixed hues. And, then, as if to offer final proof of the mind inside his bird’s brain, Alex spoke up. “Talk clearly!” he commanded, when one of the younger birds Pepperberg was also teaching talked with wrong pronunciation. “Talk clearly!” “Don’t be a smart aleck,” Pepperberg said, shaking her head at him. “He knows all this, and he gets bored, so he interrupts the others, or he gives the wrong answer just to be obstinate. At this stage. He’s like a teenager, he’s moody, and I’m never sure what he’ll do.”

Questions 14-19

Do the following statements agree with the information given in Reading Passage 2?

TRUE *if the statement agrees with the information*
FALSE *if the statement contradicts with the information*
NOT GIVEN *if there is no information for this*

14 At first, Alex has grasped quite a lot of vocabulary.

15 At the beginning of study, Alex was scared about the presence of humans.

16 Previously, many scientists knew that animals have the power to reason.

17 It has taken a long time before people realize cognition existing in animals.

18 Alex was able to answer Irene’s questions about the world roughly by imitating the sounds of English words.

19 By breaking off other parrots as well as answering incorrectly, Alex tried to be focused.

Questions 20-23

Complete the following summary of the paragraphs of Reading Passage 3, using ***NO MORE THAN THREE WORDS AND/OR A NUMBER*** *from the Reading Passage 3 for each answer.*

In order to prove her proposal, Pepperberg decided to choose a parrot from a Chicago pet store as a subject in her research. The store’s assistant picked out a bird at random for her for the sake of avoiding other scientists suspecting that the intelligent bird is 34_____ afterwards. However,

other scientists believe that animals are not capable of thinking, they would rather train 35_____ .After the training of Irene, parrot Alex grasped the way of using his vocal to pronounce more than 36_____. Pepperberg claimed that she wanted to carry out a research regarding 37_____ but not to teach him to talk.

Questions 24-26

*Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each answer.*

24 What did Alex reply concerning the similarity of the subjects showed to him?

25 What is the problem of the young parrots except Alex?

26 To some extent, which stage of human can we call him according to his behavior?

NOT GIVEN	**NOT GIVEN**	**FALSE**	**TRUE**	**TRUE**
FALSE	**particularly chosen**	**chimpanzees**	**100 English words**	**avian cognition**
color	**Wrong pronunciation**	**teenager**		

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.

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 Prison, top banana specialist at the International Network for the Improvement of Banana an Plantain in Montpellier, France. “The state of the banana”, Prison 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 Asian 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. Leftto 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 Prison. “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 Arnazonia 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 Breeders at the Honduran Foundation of Agricultural Research have tried to create disease-resistant varieties. Further backcrossing with wild bananas yielded a new seedless banana resistant to both black Sigatoka and Panama disease. 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 program 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. (This test is offered by IELTS break up master, www.ysfsds.com)

G Last year, a global consortium of scientists led by Prison announced plans to sequence the banana genome within five years. The group will actually be sequencing inedible wild bananas from East Asia because many of these are resistant to black Sigatoka. These genes could be propagated into new, resistant plants and passed on to farmers.

H It sounds promising, but the big banana companies have, until now, refused to get involved in genetically modified research for fear of alienating their customers. “Biotechnology is extremely expensive and there are serious questions about consumer acceptance,” 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.

Questions 14-16

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

14 Banana was first eaten as a fruit by humans almost_____years ago.

15 Banana was first cultivated in _____.

16 Wild banana is uneatable because of its _____.

Questions 17-23

Look at the following statements and the list of people below.

*Match each statement with the correct person, **A—F.***

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

17 Pest may result in serious damage to banana industry.

18 The effect of fungal disease in soil is in a long term.

19 A commercial supplier abandoned banana cultivation for disease resistant species.

20 Banana infection may generate resistance to chemical sprays.

21 A banana disease has mined a vast number of banana plantations.

22 Genetically altered crops would not be favored by consumers.

23 Experience can be learned from bananas for other crops.

List of People
A Rodomiro
B David Mclaughlin

C Emile Prison D Ronald Romero E Luadir Gasparotto F Geoff Hawtin

Questions 24-26

Do the following statements agree with the information given in Reading Passage 2 ?

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

24 Banana is the oldest known fruit.

25 Gros Michel is still being planted as a commercial product.

26 Banana is a main food in some areas.

10,000	**South-East Asia**	**hard seeds**	**F**	**A**
D	**C**	**E**	**B**	**C**
NOT GIVEN	**FALSE**	**TRUE**		

Monkeys and Forests

A Ken Glander, a primatologist from Duke University, gazes into the canopy, tracking the female's movements. Holding a dart gun, he waits with infinite patience for the right moment to shoot. With great care, Glander aims and fires. Hit in the rump, the monkey wobbles.

B This howler belongs to a population that has lived for decades at Hacienda La Pacifica, a working cattle ranch in Guanacaste province; Other native primates-white-faced capuchin monkeys and spider monkeys-once were common in this area, too, but vanished after the Pan-American Highway was built nearby in the 1950s. Most of the surrounding land was clear-cut for pasture.

C Howlers persist at La Pacifica, Glander explains, because they are leaf-eaters. They eat fruit, when it's available but, unlike capuchin and spider monkeys, do not depend on large areas of fruiting trees. “Howlers can survive anyplace you have half a dozen trees, because their eating habits are so flexible,” he says. In forests, life is an arms race between trees and the myriad creatures that feed on leaves. Plants have evolved a variety of chemical defenses, ranging from bad-tasting tannins, which bind with plant-produced nutrients, rendering them indigestible, to deadly poisons, such as alkaloids and cyanide.

D All primates, including humans, have some ability to handle plant toxins. “We can detoxify a dangerous poison known as caffeine, which is deadly to a lot of animals” Glander says. For leaf-eaters, long-term exposure to a specific plant toxin can increase their ability to defuse the poison and absorb the leaf nutrients.

E The leaves that grow in regenerating forests, like those at La Pacifica, are actually more howler friendly than those produced by the undisturbed, centuries-old trees that survive farther south, in the Amazon Basin. In younger forests, trees put most of their limited energy into growing wood, leaves and fruit, so they produce much lower levels of toxin than do well-established,

old-growth trees.

F The value of maturing forests to primates is a subject of study at Santa Rosa National Park, about 35 miles northwest of Hacienda La Pacifica. The park hosts populations not only of mantled howlers but also of white-faced capuchins and spider monkeys. Yet the forests there are young, most of them less than 50 years old.

G Capuchins were the first to begin using the reborn forests, when the trees were as young as 14 years. Howlers, larger and heavier than capuchins, need somewhat older trees, with limbs that can support their greater body weight. A working ranch at Hacienda La Pacifica also explain their population boom in Santa Rosa. “Howlers are more resilient than capuchins and spider monkeys for several reasons,” Fedigan explains. “They can live within a small home range, as long as the trees have the right food for them. Spider monkeys, on the other hand, occupy a huge home range, so they can't make it in fragmented habitat.”

H Howlers also reproduce faster than do other monkey species in the area. Capuchins don't bear their first young until about 7 years old, and spider monkeys do so even later, but howlers give birth for the first time at about 3.5 years of age. Also, while a female spider monkey will have a baby about once every four years, well-fed howlers can produce an infant every two years.

I The leaves howlers eat hold plenty of water, so the monkeys can survive away from open streams and water holes. This ability gives them a real advantage over capuchin and spider monkeys, which have suffered during the long, ongoing drought in Guanacaste.

J Alejandro Estrada, an ecologist at Estación de Biologia Los Tuxtlas in Veracruz, Mexico, has been exploring how monkeys survive in a landscape increasingly shaped by humans. He and his colleagues recently studied the ecology of a group of mantled howler monkeys that thrive in a habitat completely altered by humans: a cacao plantation in Tabasco, Mexico.

K Estrada believes the monkeys bring underappreciated benefits to such farms, dispersing the seeds of fig and other shade trees and fertilizing the soil with feces. He points out that howler monkeys live in shade coffee and cacao plantations in Nicaragua and Costa Rica as well as in Mexico. Spider monkeys also forage in such plantations, though they need nearby areas of forest to survive in the long term. He hopes that farmers will begin to see the advantages of associating with wild monkeys, which includes potential ecotourism projects. “Conservation is usually viewed as a conflict between agricultural practices and the need to preserve nature,” Estrada says. “We’re moving away from that vision and beginning to consider ways in which agricultural activities may become a tool for the conservation of primates in human-modified landscapes.”

Questions 1-5

Complete the sentences below

*Choose **NO MORE THAN TWO WORDS** from the passage 2 for each answer.*

1 Howlers stay in La Pacifica since their diet covers not only _____ but also other plants.

2 Leaves that feed animals in forests contain a wide range of dangerous chemical composition including tannins and _____.

3 Leaf-eaters may have a better ability to alleviate the toxin and take in the_____ exposed to certain chemical substance for a long time.

4 The _____ if they are rate of Howlers is relatively higher than that of spider monkeys and capuchin monkeys, which is just 2-4 years.

5 Resistance to continuous _____ in Guanacaste enables Howlers have a better adaptability than other monkey species.

Questions 6-9

Look at the following places and the list of descriptions below.

Match each description with the correct place, ***A-F.***

A	Hacienda La Pacifica
B	Santa Rosa National Park
C	Amazon Basin
D	Estaci6n de Biologia Los Tuxtlas in Veracruz, Mexico
E	Duke University
F	Nicaragua and Costa Rica as well as in Mexico

6 Previous habitat of monkeys was replaced thoroughly by humans.

7 Estrada indicates that farmers need to change their attitude towards monkeys.

8 All three kinds of monkeys are living there as local species.

9 Howler is the only species here.

Questions 10-13

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

10 Compared to older forests, what is the advantage of younger forests?

A generate more energy

B produce more nutrition

C release less toxin

D grow more fruits

11 Unlike Howlers, capuchins described in Paragraph G

A are larger and heavier

B prefer to live in older forests

C are more likely to have lighter weight

D are more resilient

12 What does Fedigan say about the living patterns of spider monkeys?

A do activities on a large scale

B live within a small home range

C prefer to divide the habitat into small parts

D occupy a limited home area

13 What does Estrada think of the wild monkeys?

A Howler monkeys often forage in large farms.

B Coffee and cacao ranch is an ideal place for spider monkeys.

C Associating with monkeys may exert potential dangers to local farmers.

D Agricultural activities and protection of wildlife can be done simultaneously.

fruit	(deadly)poisons	leaf nutrients	reproduce	drought
D	**F**	**B**	**A**	**C**
C	**A**	**D**		

Memory and Age

A Aging, it is now clear, is part of an ongoing maturation process that all our organs go through. “In a sense, aging is keyed to the level of vigor of the body and the continuous interaction between levels of body activity and levels of mental activity”, reports Arnold B.Scheibel, M.D. , whose very academic title reflects how once far-flung domains now converge on the mind and the brain. Scheibel is professor of anatomy, cell biology, psychiatry, and behavioral sciences at the University of California at Los Angeles, and director of the university’s Brain Research Institute. (This test is offered by IELTS break up master, www.ysfsds.com)

B Equipped with imaging techniques that capture the brain in action, Stanley Rapoport, Ph.D., at the National Institute of Health, measured the flow of blood in the brains of old and young people as they went through the task of matching photos of faces. Since blood flow reflects neuronal activity, Rapoport could compare which networks of neurons were being used by different subjects. “Even when the reaction times of older and younger subjects were the same, the neural networks they used were significantly different. The older subjects were using different internal strategies to accomplish the same result in the same time,” Rapoport says.

C At the Georgia Institute of Technology, psychologist Timothy Salthouse, Ph.D., compared a group of very fast and accurate typists of college age with another group in their 60s. Since reaction time is faster in younger people and most people’s fingers grow less nimble with age, younger typists might be expected to tap right along while the older ones fumble. But both typed 60 words a minute. The older typists, it turned out, achieved their speed with cunning little strategies that made them far more efficient than their younger counterparts: They made fewer finger movements, saving a fraction of a second here and there. They also read ahead in the text. The neural networks involved in typing appear to have been reshaped to compensate for losses in motor skills or other age changes.

D “When a rat is kept in isolation without playmates or objects to interact with, the animal’s brain shrinks, but if we put that rat with 11 other rats in a large cage and give them an assortment of wheels, ladders, and other toys, we can show — after four days — significant differences in its brain,” says Diamond, professor of integrative biology. Proliferating dendrites first appear in the visual association areas. After a month in the enriched environment, the whole cerebral cortex has expanded, as has its blood supply. Even in the enriched environment, rats get bored unless the toys are varied. “Animals are just like we are. They need stimulation.” says Diamond.

E One of the most profoundly important mental functions is memory-notorious for its failure with age. So important is memory that the Charles A. Dana Foundation recently spent $8.4 million to set up a consortium of leading medical centers to measure memory loss and aging through brain-imaging technology, neurochemical experiments, and cognitive and psychological tests. One thing, however, is already fairly clear—many aspects of memory are not a function of age at all but of education. Memory exists in more than one from. What we call knowledge—facts—is

what psychologists such as Harry P. Bahrick, Ph.D., of Ohio Wesleyan University calls semantic memory. Events, conversations, and occurrences in time and space, on the other hand, make up episodic or event memory, which is triggered by cues from the context. If you were around in 1963 you don't need to be reminded of the circumstances surrounding the moment you heard that JFK had been assassinated. That event is etched into your episodic memory.

F "Every memory begins as an event," says Bahrick. "Through repetition, certain events leave behind a residue of knowledge, or semantic memory. On a specific day in the past, somebody taught you that two and two are four, but you've been over that information so often you don't remember where you learned it. What started as an episodic memory has become a permanent part of your knowledge base." You remember the content, not the context. Our language knowledge, our knowledge of the world and of people, is largely that permanent or semipermanent residue. Probing the longevity of knowledge, Bahrick tested 1,000 high school graduates to see how well they recalled their algebra. Some had completed the course as recently as a month before, others as long as 50 years earlier. He also determined how long each person had studied algebra, the grade received, and how much the skill was used over the course of adulthood. Surprisingly, a person's grasp of algebra at the time of testing did not depend on how long ago he'd taken the course—the determining factor was the duration of instruction. Those who had spent only a few months learning algebra forgot most of it within two or three years.

G In another study, Bahrick discovered that people who had taken several courses in Spanish, spread out over a couple of years, could recall, decades later, 60 percent or more of the vocabulary they learned. Those who took just one course retained only a trace after three years. "This long-term residue of knowledge remains stable over the decades, independent of the age of the person and the age of the memory. No serious deficit appears until people get to their 50s and 60s, probably due to the degenerative processes of aging rather than a cognitive loss."

H A group of adult novice chess players were compared with a group of child experts at the game. In tests of their ability to remember a random series of numbers, the adults, as expected, outscored the children. But when asked to remember the patterns of chess pieces arranged on a board, the children won. "Because they'd played a lot of chess, their knowledge of chess was better organized than that of the adults, and their existing knowledge of chess served as a framework for new memory", explains Kail. Specialized knowledge is a mental resource that only improves with time. Crystallized intelligence about one's occupation apparently does not decline at all until at least age 75, and if there is no disease or dementia, may remain even longer. Special knowledge is often organized by a process called "chunking". If procedure A and procedure B are always done together, for example, the mind may merge them into a single command. When you apply yourself to a specific interest, say, cooking, you build increasingly elaborate knowledge structures that let you do more and do it better.

Questions 27-30

Use the information in the passage to match the people (1isted A-F) with opinions or deeds below.

A Harry P.Bahrick
B Arnold B.Scheibel
C Marion Diamond
D Timothy Salthouse
E Stanley Rapport
F Robert Kail

27 Examined both young and old’s blood circulation of brain while testing.

28 Aging is a significant link between physical and mental activity.

29 Some semantic memory of an event fade away by repetition.

30 Rat’s brain developed when put in a diverse environment.

Questions 31-36

Complete the following summary of the paragraphs of Reading Passage 3, using ***NO MORE THAN TWO WORDS*** *from the Reading Passage 3 for each answer.*

It’s long been known that 31_____ declined with age. Charles A.Dana Foundation invested millions of dollars to test memory decline. They used advanced technology and ran several cognitive and 32_____ experiments. Bahrick called one form “33_____” which describes factual knowledge. Another one is called “34_____” containing events in time and space format. He conducted two experiments toward to knowledge memory’s longevity, he asked 1000 candidates some knowledge of 35_____, and some could even remember it decades ago. Second research of Spanish course found that multiple courses participants could remember more than half of 36_____ they learned after decades, whereas single course taker only remembered as short as three years.

Questions 37-40

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

37 What does the experiment of typist show in the passage?

A The reading ability of old people is superior.

B Losses of age are irreversible.

C Seasoned tactics made elders more efficient.

D Old people performed poorly in driving test.

38 Which is correct about rat experiment?

A Different toys have different effects for rats.

B Rat’s brain weight increased in both cages.

C Isolated rat’s brain grows new connections.

D Boring and complicated surroundings affect brain development.

39 What can be concluded in chess game of children group?

A They won game with adults.

B Their organization of chess knowledge is better.

C Their image memory is better than adults.

D They used different parts of brain when chessing.

40 What is author’s purpose of using ‘‘vocabulary study’’ at the end of passage?

A Certain people are sensitive to vocabularies while others aren’t.

B Teachers and professionals won by their experience.

C Vocabulary memory as a crystallized intelligence is hard to decline.

D Old people use their special zone of brain when they study.

E	**B**	**A**	**C**	**memory-notorious**
psychological	**semantic memory**	**episodic memory**	**algebra**	**vocabulary**
C	**D**	**B**	**C**	

The Effects of Living in a Noisy World

Section A

It’s not difficult for a person to encounter sound at levels that can cause adverse health effects. During a single day, people living in a typical urban environment can experience a wide range of sounds in many locations,even once-quiet locales have become polluted with noise. In fact, it’s difficult today to escape sound completely. In its 1999 Guidelines for Community Noise, the World Health Organization (WHO) declared, “Worldwide, noise-induced hearing impairment is the most prevalent irreversible occupational hazard, and it is estimated that 120 million people worldwide have disabling hearing difficulties.” Growing evidence also points to many other health effects of too much volume.

Mark Stephenson, a Cincinnati, Ohio–based senior research audiologist at the National Institute for Occupational Safety and Health (NIOSH), says his agency’s definition of hazardous noise is sound that exceeds the time-weighted average of 85 dBA, meaning the average noise exposure measured over a typical eight-hour work day. Other measures and definitions are used for other purposes. For example, “sound exposure level” accounts for variations in sound from moment to moment, while “equivalent sound level” determines the value of a steady sound with the same dBA sound energy as that contained in a time-varying sound.

Section B

Meanwhile, there is no evidence to suggest things have gotten any quieter for residents since the EPA published its 1981 handbook. “For many people in the United States, noise has drastically affected the quality of their lives,” says Arline L. Bronzaft, chair of the Noise Committee of the New York City Council of the Environment and a psychologist who has done pioneering research on the effects of noise on children’s reading ability. “My daughter lives near La Guardia airport in New York City, and she can’t open a window or enjoy her backyard in the summer because of the airplane noise.”

Indeed, the term secondhand noise is increasingly used to describe noise that is experienced by people who did not produce it. Anti-noise activists say its effect on people is similar to that of secondhand smoke. “Secondhand noise is really a civil rights issue,”says Les Blomberg, executive director of the Noise Pollution Clearinghouse, an anti-noise advocacy group based in Montpelier, Vermont.“Like secondhand smoke, it’s put into the environment without people’s consent and then has effects on them that they don’t have any control over.”

Noise is indeed everywhere, and experts expect no decrease in noise levels, given the powerful impact of technology on modern life. “ In the past three decades, we have built noisier and noisier devices that are not subject to any regulations,” Blomberg says. “Think about it. The car alarm is a seventies invention, as is the leaf blower. The stereo sound systems we have in our cars are much louder than the sound system the Beatles used for their concerts in the sixties. All they had back then were three-hundred-amp speakers.”

Section C

Numerous scientific studies over the years have confirmed that exposure to certain levels of sound can damage hearing. Prolonged exposure can actually change the structure of the hair cells in the inner ear, resulting in hearing loss. It can also cause tinnitus, a ringing, roaring, buzzing, or clicking in the ears.

William Luxford, medical director of the House Ear Clinic of St. Vincent Medical Center in Los Angeles, points out one piece of good news: “It’s true that continuous noise exposure will lead to the continuation of hearing loss, but as soon as the exposure is stopped, the hearing loss stops. So a change in environment can improve a person’s hearing health.”

Research is catching up with this anecdotal evidence. In the July 2001 issue of Pediatrics, researchers from the Centers for Disease Control and Prevention reported that, based on audiometric testing of 5,249 children as part of the Third National Health and Nutrition Examination Survey, an estimated 12.5% of American children have noise-induced hearing threshold shifts—or dulled hearing—in one or both ears. Most children with noise-induced hearing threshold shifts have only limited hearing damage, but continued exposure to excessive noise can lead to difficulties with high-frequency sound discrimination. The report listed stereos, music concerts, toys (such as toy telephones and certain rattles), lawn mowers, and fireworks as producing potentially harmful sounds.

Section D

The effects of sound don’t stop with the ears. Nonauditory effects of noise exposure are those effects that don’t cause hearing loss but still can be measured, such as elevated blood pressure, loss of sleep, increased heart rate, cardiovascular constriction, labored breathing, and changes in brain chemistry.

The nonauditory effects of noise were noted as early as 1930 in a study published by E.L. Smith and D.L. Laird in volume 2 of the Journal of the Acoustical Society of America. The results showed that exposure to noise caused stomach contractions in healthy human beings. Reports on noise’s nonauditory effects published since that pioneering study have been both contradictory and controversial in some areas.

Bronzaft and the school principal persuaded the school board to have acoustical tile installed in the classrooms adjacent to the tracks. The Transit Authority also treated the tracks near the school to make them less noisy. A follow-up study published in the September 1981 issue of the Journal of Environmental Psychology found that children’s reading scores improved after these interventions were put in place. “ After we did the study, more than twenty-five other studies were done examining the effect of noise on children’s learning ability,” Bronzaft says. “They have all found the same thing to be true: noise can affect children’s learning.”

Section E

Worldwide, airports have become a flash point for community frustration over noise pollution.In March 2003, representatives from eight neighborhoods in Portland, Oregon, showed up for a city council hearing convened to discuss dozens of expansion projects for Portland International Airport. The airport was already a busy one: in 2002 it handled 12.2 million passengers andabout 29,000 containers of air cargo. “The impacts are tremendous on the neighborhoods under the flight paths,” testified one neighborhood representative, Jean Ridings. “People move in and move out. It’s becoming a disaster.” In response, the airport has initiated a multiyear, multimillion-dollar effort to study the sound impact of the airport, which locals hope will lead to a plan to reduce airport noise. (This test is offered by IELTS break up master, www.ysfsds.com)

In the European Union, countries with cities of at least 250,000 people are creating noise maps of those cities to help leaders determine noise pollution policies. Paris has already prepared its first noise maps. The map data, which must be finished by 2007, will be fed into computer models that will help test the sound impact of street designs before construction begins.

Questions 14-18

Complete the summary below.

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

Nowadays it seems difficult for people to aviod the effects of living in a noisy world.Noise is the sound beyond average of 14_____ referring to the agency’s definition. Noise experienced by people who did not produce it is called 15_____. Scientific studies over the years have confirmed that exposure to certain levels of sound can damage hearing. From the testing of 5,249 children, those who are constantly exposed to excessive noise may have trouble in 16_____ sound discrimination. The effects of sound don’t stop with the ears,exposure to noise leads to 17_____ in healthy people. Europe has taken steps on the noise issue,big cities of over 250,000 people are creating 18_____to help creating noise pollution policies.

Questions 19-23

Look at the following researchers and the list of findings below.Match each researcher with the correct finding.

A Mark Stephenson
B Arline L.Bronzaft
C Les Blomberg
D William Luxford
E Jean Ridings

19 People can change the environment to improve hearing health.

20 Reasearch on his agency’s definition of dangerous noise.

21 Technology has a strong impact on modern life due to inventions of noisy devices.

22 The Portland International Airport has tremendous effect on the dwellers around.

23 Noise has effect on children’s reading ability.

Questions 24-26

Answer the questions below.

*Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer.*

24 What are the effects that can be measured without leading to hearing deficiency?

25 What are the classrooms equipped with beside the tracks?

26 What dose the map data help test sound effect before the construction?

dBA	secondhand noise	high-frequency	stomach contractions	noise maps
D	A	C	E	B
nonauditory effects	acoustical tile	street designs		

Animal’s Self-Medicating

Many animals seem able to treat their illnesses themselves. Humans may have a thing or two to learn from them.

A For the past decade Dr. Engel, a lecturer in environmental sciences at Britain’s Open University, has been collecting examples of self-medicating behavior in wild animal. She recently published a book on the subject, in a talk at the Edinburgh Science Festival earlier this month, she explained that the idea animals can treat themselves has been regarded with some skepticism by her colleagues in the past. But a growing number of animal behaviorists now think that wild animals can and do deal with their own medical needs.

B One example of self-medication was discovered in 1987. Michael Huffman and Mohamedi Seifu, working in the Mahale Mountains National Park in Tanzania, noticed that local chimpanzees suffering from intestinal worms would dose themselves with the pith of a plant called Veronia. This plant produces poisonous chemicals called terpenes. Its pith contains a strong enough concentration to kill gut parasites, but not so strong as to kill chimps (nor people, for that matter; locals use the pith for the same purpose). Since the Veronia-eating chimps were discovered, more evidences have emerged suggesting that animals often eat things for medical rather than nutritional reasons. Many species, for example, consume dirt-a behaviour known as geophagy. Historically, the preferred explanation was that soil supplies minerals such as salt. But geophagy occurs in areas where the earth is not a useful source of minerals, and also in places where minerals can be more easily obtained from certain plants that are known to be rich in them. Clearly, the animals must be getting something else out of eating earth.

C The current belief is that soil, and particularly the clay in it, helps to detoxify the defensive poisons that some plants produce in an attempt to prevent themselves from being eaten. Evidence for the detoxifying nature of clay came in 1999, from an experiment carried out on macaws by James Gilardi and his colleagues at the University of California, Davis. Macaws eat seeds containing alkaloids, a group of chemicals that has some notoriously toxic members, such as strychnine. In the wild, the birds are frequently seen perched on eroding riverbanks eating clay. Dr. Gilardi fed one group of macaws a mixture of a harmless alkaloid and clay, and a second group just the alkaloid. Several hours later, the macaws that had eaten the clay had 60% less alkaloid in their bloodstreams than those that had not, suggesting that the hypothesis is correct.

D Other observations also support the idea that clay is detoxifying. Towards the tropics the amount of toxic compounds in plants increases and so does the amount of earth eaten by herbivores. Elephants lick clay from mud holes all year round, except in September when they are bingeing on fruit which, because it has evolved to be eaten, is not toxic. And the addition of clay to the diets of domestic cattle increases the amount of nutrients that they can absorb from their food by 10%-20%. (This test is offered by IELTS break up master, www.ysfsds.com)

E A third instance of animal self-medication is the use of mechanical Scours to get rid of gut parasites. In 1972 Richard Wrangham, a researcher at the Gombe Stream Reserve in Tanzania, noticed that chimpanzees were eating the leaves of a tree called Aspilia. The chimps chose the leaves carefully by testing them in their mouths. Having chosen a leaf, a chimp would fold it into a fan and swallow it. Some of the chimps were noticed wrinkling their noses as they swallowed these leaves, suggesting the experience was unpleasant. Later, undigested leaves were found on the forest floor.

F Dr.Wrangham rightly guessed that the leaves had a medicinal purpose-this was, indeed, one of the earliest interpretations of a behaviour pattern as self-medication. However, he guessed wrong about what the mechanism was. His and everybody else's assumption was that Aspilia contained a drug, and this sparked more than two decades of phytochemical research to try to find out what chemical the chimps were after. But by the 1990s, chimps across Africa had been seen swallowing the leaves of 19 different species that seemed to have few suitable chemicals in common. The drug hypothesis was looking more and more dubious.

G It was Dr.Huffman who got to the bottom of the problem. He did so by watching what came out of the chimps, rather than concentrating on what went in. He found that the egested leaves were full of intestinal worms. The factor common to all 19 species of leaves swallowed by the chimps was that they were covered with microscopic hooks. These caught the worms and dragged them from their lodgings. (This test is offered by IELTS break up master, www.ysfsds.com)

H Following that observation, Dr.Engel is now particularly excited about how knowledge of the way that animals look after themselves could be used to improve the health of livestock. People might also be able to learn a thing or two and may,indeed， already have done so. Geophagy, for example, is a common behaviour in many parts of the world. The medical stalls in African markets frequently sell tablets made of different sorts of clays, appropriate to different medical conditions.

I Africans brought to the Americas as slaves continued this tradition, which gave their owners one more excuse to affect to despise them. Yet, as Dr. Engel points out, Rwandan mountain gorillas eat a type of clay rather similar to kaolinite-the main ingredient of many patent medicines sold over the counter in the West for digestive complaints. Dirt can sometimes be good for you, and to be “as sick as a parrot” may, after all, be a state to be desired.

Questions 1-4

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

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

1 Dr. Engel has been engaged in animal self-medication research since ten years ago.

2 Sometimes animals have to travel a long distance in order to hunt for plant for medication.

3 Due to the preference of natural diet, birds like macaw are seen eating clay.

4 Dr. Engel is quite excited about research on animal self-medication for reforming drugs for livestock. (This test is offered by IELTS break up master, www.ysfsds.com)

Questions 5-8

Complete the summary below using words from the box.

Write correct letters, A-H. in boxes 5-8 on your answer sheet.

The research animal self-medication has been supported by much evidence. One of them is called **5**_____, a common soil-consuming behavior across animal species. This behavior is due to the earth, especially clay, can neutralize the **6**_____ content of their diet. Similarly, people in Africa take **7**_____ to treat various diseases. Another relevant one is about chimps that eat leaves with **8**_____ taste probably, but with medicinal value due to their special structure.

A mineral	**B** plants	**C** unpleasant	**D** toxic
E clay tablets	**F** nutritional	**G** geophagy	**H** harmless

Questions 9-13

Name	Date	Animal	Food	Mechanism
Michael Huffman and Mohamedi Seifu	1987	Chimpanzee	9___of Veronia	It contains chemicals named 10___which can be used as parasiticide
James Gilardi and his colleagues	1999	Macaw	Seeds (contain 11___)and clay	Clay can 12____the toxic contents in food
Richard Wrangham	1972	Chimpanzee	Leaves with tiny 13___ on surface	Such leaves can catch and expel worms from intestines

TRUE	**NOT GIVEN**	**FALSE**	**TRUE**	**G**
D	**E**	**C**	**pith**	**terpenses**

alkaloids	**detoxify**	**hooks**		

Development of Public Management Theory

A Several theorists bridged the gap between strictly private and public sector management. One good example is Max Weber, who explored the ideal bureaucracy in The Protestant Ethic and the Spirit of Capitalism. According to him, bureaucracy is the most efficient form of organization.

The characteristics or features of Bureaucratic Organisation

B Weber admired bureaucracy for its trustworthiness. The bureaucracy was constituted by a group of professional, ethical public officials. These servants dedicate themselves to the public in return for security of job tenure among the many advantages of public employment. There is a high degree of division of labour and specialisation as well as a defined hierarchy of authority. There are well defined rules and regulations which follows the principle of rationality, objectively and consistency. And their rules cover all the duties and rights of the employees. Selection and promotion is based on technical qualifications and these rules must be strictly followed. There are formal and impersonal relations among the member of the organization. Interpersonal relations are based on positions and not on personalities.

C Bureaucratic organization is criticised because of the following reasons: bureaucratic organization is a very rigid type of organization. Too much emphasis has been put on rules and regulations， which are rigid and inflexible. No importance is also given to informal groups which nowadays play an important role in all business organisations and human relations. Dedication and commitment of the employee is not considered. Yet, too much importance is given to the technical qualifications of the employees for promotion and transfers, so it is suitable for government organisations. Unnecessary delay in decision-making and the difficulty in coordination and communication due to formalities and rules make it only suitable for static organisation and organisations where change is very slow.

Management: A consolidated discipline

D Herbert Simon, Chester Barnard, and Charles Lindblom are among the first of those recognized as early American public administrators. These men ushered in an era during which the field gained recognition as being independent and unique, despite its multidisciplinary nature. Simon contributed a fact-value dichotomy, a theoretical separation to discern management, decisions based upon fact versus those made based on values. He also taught that a strictly economic man, one who maximizes returns or values by making decisions based upon complete information in unlimited time, is unrealistic. Instead, most public administrators use a sufficient amount of information to make a satisfactory decision: they “satisfice”.

E In decision-making, Simon believed that agents face uncertainty about the future and costs in acquiring information in the present. These factors limit the extent to which agents may make a fully rational decision, thus they possess only “bounded rationality” and must make decisions by “satisficing”, or choosing that which might not be optimal, but which will make them happy enough. “Rational” behavior, in economics, means that individuals maximizes his utility function under the constraints they face (e.g., their budget constraint, limited choices) in pursuit of their self-interest. (This test is offered by IELTS break up master, www.ysfsds.com)

F Chester Barnard was also one of the watershed scholars. Barnard published “The Economy of

Incentives” (1938), in an attempt to explain individual participation in an organization. Low-level employees must have more incentive to remain with the organization for which they exchange their labor and loyalty. The organization (and higher level employees) must derive sufficient benefit from its employees to keep them. The net pull of the organization is determined by material rewards, environmental conditions, and other intangibles like recognition. He gives great importance to persuasion, much more than to economic incentives. He described four incentives including money and other material inducements; personal non-material opportunities for distinction; desirable physical conditions of work; ideal benefactions, such as pride of workmanship etc.

A new humanist ear: Rethinking power and management

G Humanists embrace a dynamic concept of an employee and management techniques. This requires a theoretical shift away from the idea that an employee is a cog in the industrial machine. Rather, employees are unique individuals with goals, needs, desires, etc.

H The humanist era ushered in other possible interpretations of such topics as power and management. One of the most significant was Douglas McGregor’s “Theory X and Theory Y”. McGregor’s work provided a basis for a management framework, a structure upon whose rungs the classic and new-aged management might be hung. First, commonly held by early management theorists, Theory X begins with the assumption that humans possess an inherent aversion to work. Employees must therefore be coerced and controlled if management expects to see results. Further, lazy humans prefer direction bordering micromanagement whenever possible. (This test is offered by IELTS break up master, www.ysfsds.com)

I Theory Y is much more compatible with the humanist tradition. This begins with the assumption that work is as natural for humans as rest or play. Further, employees will direct and control themselves as they complete objectives. Humans learn naturally and seek responsibility. Consequently, managers need only to steer employees in a cooperative manner toward goals that serve the organization. There is room for many to create and share power.

J The Z-Organization can be thought of as a complimentary third element to McGregor’s dichotomy. Similar to Theory-Y management, Z organizations place a large degree of responsibility upon the employees. Further, relatively low-level employees are entrusted with the freedom to be creative, “wander around the organization” and become truly unique, company-specific employees. However, employees achieve only after “agreeing on a central set of objectives and ways of doing business”. In Z-Organizations, decision-making (Simon’s ostensible basis of management) is democratic and participatory. Its drawbacks include the depredation of a large professional distance-de-personalization is impossible in Z-organizations. Since, in reality, there is high percentage of workers would like work for the financial return than the job objectives. A high level of self-discipline is also necessary.

Questions 14-21

*Choose **Two** appropriate letters and fill in boxes **14**-**15.***

What are the features and advantages for Bureaucratic Management?

A There are rationalism, openness and freedom coming from the a rigidly hierarchical institution.

B Promotion process will be more equal based on responsibilities.

C Employees enjoy a greater freedom of duties than their strict right.

D The selection process and promotion depends on the mastery of new technology.

E These employees can contribute themselves to get stable position.

*Choose **Two** appropriate letters and fill in boxes **16**-**17.***

What are the limitations for the ideas of Bureaucratic Management?

A Commitment of the employee is not considered enough in the decision-making process.

B The efficiency get hurt by the formalities and rules.

C Employees are casually oragnised as formal groups are considered as interior one.

D It is not applicable to fast-changing dynamic organisations.

E There is difficulty in enforcement of rules and regulations.

*Choose **Two** appropriate letters and fill in boxes **18**-**19**.*

What are the objections of management as Douglas McGregor's work of the "Theory Y"?

A Managers may guide employees in a cooperative manner toward objectives.

B Employees own the internal inertia against work.

C Humans will not be proactive to responsibility.

D Employees must be coerced and controlled if management expects to see results.

E There isn't much room for manager to appoint or share his power.

*Choose **Two** appropriate letters and fill in boxes **20**-**21***

What are the limitations for the "Z Organization"?

A Personalization still exist in organizations.

B Organization mode has inherent design fault.

C Not all employee set higher interest in the j ob than that of wages.

D The process of decision—making is democratic and participatory.

E Self-discipline is an superfluous quality.

Questions 22-26

*Use the information in the passage to match the people (listed **A**-**E**) with opinions or deeds below.*

(This test is offered by IELTS break up master, www.ysfsds.com)

***NB** Some people may match more than one ideas.*

A Mark weber
B McGregor
C Herbert Simon
D Chester Barnard

E Charles Lindblom

22 Staff likes to follow unique public officials to fasten a job.

23 High efficiency can be achieved only after agreeing on the core goal and working method.

24 In addition to material rewards, managers are supposed to take the emotion factors into incentives system.

25 Employees are able to enlarge their self-interest when the funding and choices are used well.

26 The assumption that humans possess a natural dislike to work who ought to be forced and controlled.

BE	**AD**	**CE**	**AC**	**A**
B	**D**	**C**	**B**	

Questions 27-33

Reading Passage 3 has seven paragraphs, ***A-G.***

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

List of Headings

i The emergence of delicate instruments

ii Different techniques applied to mass production

iii Distinguished pioneers' work contributed to mass production of firearm

iv The controversy on the innovator of interchangeable pans instead of Whitney

v Determinants of limiting the guns production

vi Different opinions on the permission of guns production inspired by Ford

vii The beginning of mass production to manufacture guns

viii The significant role of interchangeable parts

27 Paragraph **A**

28 Paragraph **B**

29 Paragraph **C**

30 Paragraph **D**

31 Paragraph **E**

32 Paragraph **F**

33 Paragraph **G**

A Despite its obvious connection, mass production was not a corollary to the modern Industrial Revolution. Various mass production techniques had been practiced in ancient times, from ceramic production in the Orient to manufacturing in ancient Greece. The British were most likely the first modern economy to adapt water-powered, then steam-powered machinery to industrial production methods most notably in the textiles industry. Yet it is generally agreed that modern mass production techniques came into widespread use through the innovation of an assortment of Americans who substantially improved the ancient techniques. Indeed, this modern mass production was called the American System and its early successes are often attributed to Eli Whitney, who adapted mass production techniques and the interchangeability of parts to the manufacture of muskets for the U. S. government in the late l790s.

B While Whitney was certainly an innovator of the American System, others maintain that Whitney’s parts were not truly interchangeable and that credit should more appropriately go to john Hall, the New England gunsmith who built muskets with flintlock for the United States government at the Harper's Ferry armory. Flintlock, as it was implied meant people used it to trigger the gun. Hall, born in Maine in 1769, built many of the machine tools needed for precision manufacturing and instituted a system that employed accurate gauges for measuring every aspect and piece of work his factory produced. Consequently, he achieved a much higher level of interchangeability and precision than did Whitney. Still others maintain that the credit for these modern innovations should go to a French gunsmith whose methods and results predated those of Whitney and Hall by at least a decade. In Britain, and somewhat simultaneously with Whitney, the Frenchman Marc Isambard Brunei adapted steam-driven machinery and assembly-line techniques to the production of 130,000 pulleys for the marine industry in just one year. Brunei’s achievements were made possible by the design and manufacture of several machine tools by the noted British inventor, Henry Maudslay.

C Maudslay’s contribution to modern mass production was the invention of precision machine tools capable of producing the identical parts necessary for mass production techniques which made producing guns cheaper. It is generally conceded that the British machine tool industry was far more advanced than that of the Americans in these early stages of mass production development. Simultaneous with Whitney's innovations in the United States were those of Oliver Evans, whose many inventions in the flour milling process led to an automated mill that could be run by a single miller.

D Samuel Colt and Elisha King Root were also very successful innovators in the development of industrial processes that could mass produce interchangeable parts for the assembly-line production of firearms. Colt and Root wished to advance the machining of parts so that even the most minute of tasks could be performed with the precision that they believed only machines could achieve. In these endeavors, Colt and Root were largely successful.

E Eli Terry also adapted mass production methods to clock making in the early 1800s, and George Eastman made innovations to assembly-line techniques in the manufacture and the developing of photographic film later in the century. Credit for the development of large scale, assembly-line and mass production techniques is usually given to Henry Ford and his innovative Model T production methods. Henry Ford had his workers standing in one place while parts were brought by on conveyor belts, and the car itself moved past the workers on another conveyor belt. Bodies were built on one line and the chassis and drive train were built on another. When both were essentially complete, the body was lowered onto the chassis for final assembly. Around the same time, production of guns also entered into the assembly line.

F Despite the fact that he was not the first, Ford can certainly be viewed as the most successful of these early innovators due to one simple fact-Ford envisioned and fostered mass consumption as a corollary to mass production. Ford's techniques lessened the time needed to build a Model T from about twelve and a half hours to an hour and a half； the price was reduced as well-from

$850 for the first Model T in 1908, to only $290 in 1927 after assembly-line techniques were introduced in 1913. The automobile was no longer a luxury for the rich, the Model T fast became a necessity for nearly everyone. Indeed, Ford sold almost half of all of the automobiles bought worldwide from 1908 to 1927-the years of Model T production. Apart from this, people showed different views over whether guns should be involved in mass production. The expense opposition to ammunition was the first one to trigger the debate. Other equipment involved in war or preparation for war was also against. Let alone all these required a lot of workforce to accomplish. (This test is offered by IELTS break up master, www.ysfsds.com)

G Assembly-line techniques also required that the manual skills necessary to build a product be altered. Previous to mass production techniques, as seen in the early manufacture of firearms, each workman was responsible for the complete manufacture and assembly of all of the component parts needed to build any single product. Mass production and parts interchangeability demanded that all parts be identical and the individual worker no longer be allowed the luxury of building a complete product based on his personal skills and inclinations. Machines came to dictate the production process, and each part-once created individually by hand-was now duplicated by a machine process that was merely guided by human control. The craft tradition, dominant in human endeavor for centuries, was abandoned in favor of a process that created parts by machine. Furthermore, assembly of these machine-made parts was divided into a series of small repetitive steps that required much less skill than traditional craftsmanship. Consequently, modern mass production techniques, while certainly increasing the efficiency of the manufacturing process and bringing industrial products within the reach of virtually all of humanity, apart from manufacturing ballpoint pens, making of gun is also part of it. But safety is also a factor to consider. People succeeded in restraining the production of guns resulting and only 4 manufactures were permitted to produce guns in mass production.

Questions 34-36

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

34 What is the purpose of flintlock as mentioned in the passage?

A Decorate the gun.

B Polish the gun.

C Fire the gun.

D Maintain the gun.

35 Why does the author quote an example concerning Ford?

A To prove that mass production required detailed techniques.

B To show that every object could be detached into several parts.

C To show Ford’s influence on mass production.

D T0 demonstrate that he was business-minded.

36 What is the main contribution of Maudslay?

A Introduced assembly line for producing interchangeable parts of guns.

B Innovated delicate instruments for guns production at a lower cost.

C Shortened the time for manufacturing guns.
D Set a standard of making guns and the standard of interchangeable parts.

Questions 37-39

Complete the following summary of the paragraphs of Reading Passage 3, using ***NO MORE THAN TWO WORDS*** *from the Reading Passage 3 for each answer.*

The success of applying assembly line to the production of automobiles led to the same practice for guns. However, people mainly gave their **37**_____ to buying ammunition. Moreover, other **38**_____ were required in the war which demanded a big **39**_____to back up.

Question 40

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

40 Which might serve as the best subtitle for the passage?

A The significance of producing interchangeable parts
B The origin of auto assembly line
C A marvelous advancement in firearm production
D The origin of mass production

ii	**iii**	**i**	**viii**	**vii**
vi	**v**	**C**	**B**	**B**
opposition	**equipments**	**workforce**	**D**	

Seed Hunters

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.

A Seed hunters travel the four corners of the globe, scouring jungles, forests and savannas. But they’ re not looking for ancient artifacts, 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, one botanical treasure hunter 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 traveled 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 modem mission drives hunters such as Dr Michiel van Slageren, a good natured Dutchman who often spots 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 machines 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 while the reality 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.

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 Many seed banks are themselves under threat due to a lack of funds. Last year, 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 1-5

Complete the following summary of the paragraphs of Reading Passage1, using ***NO MORE THAN THREE WORDS*** *from Reading Passage for each answer.*

People collect seeds for different reasons: some people gather seeds for their potential of becoming 1_____; others collect them for saving certain species of plant from 2_____. Those who hunt seeds are called seed hunters. The 3_____gardeners and botanists, such as 4_____of these people included both, who financed hunters by himself. Generally, the collected seeds are saved in seed banks. The most notable one is the Millennium Seed Bank, where seeds are stored in 5_____at a low temperature.

Questions 6-11

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

TRUE	*If the statement agrees with the information*
FALSE	*If the statement contradicts the information*
NOT GIVEN	*If there is no information on this*

6 The purpose of collecting seeds now is different from the past.

7 The Millennium Seed Bank is one of the earliest seed banks.

8 Farmland expansion is a major reason for plant species extinguishment.

9 The method of conserving seeds is similar between scientists and farmers.

10 The only way to protect plant species is to develop technology.

11 The works of seed conservation are restrained due to the shortage of money.

Questions 12-14

Choose two correct letters, ***A-E****, for the question below.*

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

A food

B fuel

C clothes

D energy

E commercial products

drugs or crops	extinction	pioneers	Sir Joseph Banks	underground vaults
T	**NG**	**T**	**T**	**F**
T	**A**	**B**		

Koalas

A Easily recognised by its stout, tailless body round, fluffy ears, and large, spoon-shaped nose, koalas are just too nice for their own good. And except for the occasional baby taken by birds of prey. Koalas have no natural enemies. In an ideal world, the life of an arboreal couch potato would be perfectly safe and acceptable.

B Just two hundred years ago, koalas flourished across Australia. Now they seem to be in decline,

but exact numbers are not available as the species would not seem to be ‘under threat’. Their problem, however, has been man, more specifically, the white man. Koala and Aborigine had co-existed peacefully for centuries. (This test is offered by IELTS break up master, www.ysfsds.com)

C Today koalas are found only in scattered pockets of southeast Australia, where they seem to be at risk on several fronts. The koala's only food source, the eucalyptus tree, has declined. In the past 200 years, a third of Australia's eucalyptus forests have disappeared. Koalas have been killed by parasites, chlamydia epidemics and a tumour-causing retrovirus. And every year 11,000 are killed by cars, ironically most of them in wildlife sanctuaries, and thousands are killed by poachers. Some are also taken illegally as pets. The animals usually soon die, but they are easily replaced.

D Bush fires pose another threat. The horrific ones that raged in New South Wales recently killed between 100 and 1,000 koalas. Many that were taken into sanctuaries as shelters were found to have burnt their paws on the glowing embers. But zoologists say that the species should recover. The koalas will be aided by the eucalyptus, which grows quickly and is already burgeoning forth after the fires. So the main problem to their survival is their slow reproductive rate-they produce only one baby a year over a reproductive lifespan of about nine years.

E The latest problem for the species is perhaps more insidious. With plush, grey fur, dark amber eyes and button nose, koalas are cuddliness incarnate. Australian zoos and wildlife parks have taken advantage of their uncomplaining attitudes, and charge visitors to be photographed hugging the furry bundles. But people may not realise how cruel this is, but because of the koala’s delicate disposition, constant handling can push an already precariously balanced physiology over the edge.

F Koalas only eat the foliage of certain species of eucalyptus trees, between 600 and 1,250 grams a day. The koala has several adaptations for its eucalypt diet, which is of low nutritive value, of high toxicity and high in dietary fibre. The animal’s dentition consists of the incisors and cheek teeth, which are separated by a large gap. The incisors are used for grasping leaves, which are then passed to the premolars to be snipped at the petiole before being passed to the highly cusped molars, where they are shredded into small pieces. The tough leaves of eucalyptus are packed with cellulose, tannins, aromatic oils and precursors of toxic cyanides. To handle this cocktail, koalas have a specialised digestive system. Cellulose-digesting bacteria in the caecum break down fibre, while a specially adapted gut and liver process the toxins. To digest their food properly, koalas must sit still for 21 hours every day. Since eucalypt leaves have a high water content, the koala does not need to drink often. The word “koala” means “not taking in water” in Aborigines and that is the origin of its name.

G Koalas are the epitome of innocence and inoffensiveness. Although they are capable of ripping open a man’s arm with their needle-sharp claws, or giving a nasty nip, they simply wouldn’t. If you upset a koala, it may blink or swallow, or hiccup. But attack? No way! Koalas are just not aggressive. They use their claws to girp the hard smooth bark of eucalyptus trees.

H They are also very sensitive, and the slightest upset can prevent them from breeding, cause

them to go off their food, and succumb to gut infections. Koalas are stoic creatures and put on a Fur is light-grey to brown with white spots on neck, chest, brave face until they are at death's door. One day they may appear healthy, the next they could be dead. Captive koalas have to be weighed daily to check that they are feeding properly. A sudden loss of weight is usually the only warning keepers have that their charge is ill. Only two keepers plus a vet were allowed to handle London Zoo's koalas, as these creatures are only comfortable with people they know. A request for the koala to be taken to meet the Queen was refused because of the distress this would have caused the marsupial. Sadly, London's Zoo no longer has a koala. Two years ago the female koala died of a cancer caused by a retrovirus. When they come into heat, female koalas become more active, and start losing weight, but after about 16 days, heat ends and the weight piles back on. London's koala did not. Surgery revealed hundreds of pea-sized tumours.

I Almost every zoo in Australia has koalas-the marsupial has become the Animal Ambassador of the nation, but nowhere outside Australia would handling by the public be allowed. Koala cuddling screams in the face of every rule of good care. First, some zoos allow koalas to be passed from stranger to stranger, many children who love to squeeze. Secondly, most people have no idea of how to handle the animals; they like to cling on to their handler, all in their own good time and use his or her arm as a tree. For such reasons, the Association of Fauna and Marine parks, an Australian conservation society is campaigning to ban koala cuddling. Policy on koala handling is determined by state government authorities and members from Australian Nature Conservation Agency, with the aim of instituting national guidelines. Following a wave of publicity, some zoos and wildlife parks have stopped turning their koalas into photo.

Questions 15-19

Choose the correct letter, A, C or D.

15 All the following facts cause the population of koala decreases EXCEPT

A by hunters

B by catching infectious diseases

C giving too many birth yet survived little

D being stroke by automobiles

16 Koalas prefer to fully absorb the tough leaves by

A poisonous chemical in the leaves

B unique organs that dissolve the fibres

C keeping immobile for nearly whole day

D eating leaves which belong to other trees

17 What would koalas react when being disturbed?

A Behave strangely and show signs of being offended

B Fight back immediately

C Attack the offender by their threatening claws
D Use claws to grip the bark of trees

18 How do Australia wildlife parks make use of koalas to gain profit?
A Encourage visitors to adopt koalas
B Allow tourists to hug the koalas
C Charge tourists by allowing them shooting videos with koalas
D Use koalas as the mascot of the zoo

19 What would the authorities d0 to keep koalas from threats?
A Launch protective rules and regulations
B Fine zoos for improper handling of koalas
C Encourage people to resist visiting the zoos
D Plan to build more natural preservation zones

Questions 20-26

Do the following statements agree with the information given in Reading Passage 2?

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

20 New coming human settlers imposed great danger on koalas.
21 Nowadays, koalas can still be spotted throughout all territory of Australia.
22 It normally spends the eucalyptus trees a decade sprouting after a bushfire.
23 Koalas will fight each other when food becomes scarce.
24 We could not distinguish sick koalas from robust ones just by observation.
25 Koalas are open to human epidemics through close encounters.
26 Koalas would regard a person’ s arm as a trunk when embraced.

Questions 27

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

27 The identity of the author of this article may probably be
A a reporter who writes for a magazine
B an animal activist who strongly opposes koala cuddling
C a tourist who have just visited Australia
D a government official who studies koalas to establish a law

C	**C**	**A**	**B**	**A**
YES	**NO**	**NO**	**NOT GIVEN**	**YES**
NOT GIVEN	**YES**	**A**		

A New Concept of “Market”

Maybe Ben & Jerry’ s and The Body Shop set themselves up for a fall by appearing to have a monopoly on making an honest buck. But their struggles are a lesson on how little we know about

the minefield of “ethical” marketing. The Body Shop, along with the American ice cream maker Ben and Jerry’s, Was hailed as a new breed of green, or environmentally conscious business.

Ben and Jerry’s

A Ben & Jerry’s offers a very sweet benefits package to employees. First, every one of the over 700 Ben＆Jerry’s workers is entitled to three free pints of ice cream, sorbet or frozen yogurt per day worked. Some workers even use their allotments of free treat to barter for other goods and services in town such as haircuts. Beyond the freebies, personnel receive a 50% discount on the company's frozen goodies, a 40% discount on merchandise and a further 30% break on non-Ben ＆Jerry's foods at company outlets. In return, staff is encouraged to make more contribution to the company and even the society, especially giving a helping hand to needy population.

B Workers are further entitled to be paid family leave and may take advantage of the employee stock purchase program to purchase company stock, after six months with the organization, at a 15% discount. Begun in 1998,316 stock options have been awarded to each worker, excluding directors and officers, and stock is also assigned to each employee’s plan at the end of the calendar year. These contributions are intended to achieve the company's goal of linked prosperity, assuring that future prosperity is widely shared by all employees.

C There are also some other attractive benefits, which include: health insurance, including coverage for well baby-care and mammograms; life insurance, which is twice the employee's annual salary; dental insurance; long-term disability plan, paying 60% of salary six months after disability for duration of disability; short-term disability plan, paying 60% of salary for six months; maternity leave with full pay for six weeks after delivery, etc.

The Body Shop

D The origin of The Body Shop can be described as an unbelievable magical story. In the year of l976, Anita Roddick, a common woman in British, started The Body Shop with a mere £4,000 and a dream in Brighton of England. From her original shop, which offered a line of 25 different lotions, creams, and oils, Roddick became the first successful marketer of body care products that combined natural ingredients with ecologically-benign manufacturing processes. Her company’s refusal to test products on animals, along with an insistence on non-exploitative labor practices among suppliers around the world, appealed especially to upscale, mainly middle-class women, who were and have continued to be the company’s Drimary market. As sales boomed, even the conservative financial markets approved of The Body Shop's impressive profit picture, and a public stock offering in 1984 was completely successful. This was the time when an expansion campaign is needed. In 1988 the company entered the US market by opening a store in New York City, and by 1997 the company boasted 1,500 stores, including franchises in 47 countries. Anti-marketing seemed to be smart marketing, at least as far as The Body Shop was concerned.

E Part of the secret of The Body Shop's early success was that it had created a market niche for itself. The company was not directly competing against the traditional cosmetics companies, which marketed their products as fashion accessories designed to cover up flaws and make women look more like the fashion models who appeared in their lavish ads. Instead, The Body Shop offered a line of products that promised benefits other than appearance, healthier skin, for instance, simply a better-looking complexion. The company is also known for pioneering the natural-ingredient cosmetic market and establishing social responsibility as an integral part of company operations. The Body Shop is known for its ethical stances, such as its monetary donations to the communities in which it operates, and its business partnerships with developing

countries. In 1988 Roddick opened her first store in the United States, and by that time, through various social initiatives such as the “Stop the Bum” campaign to save the Brazilian rainforest, the source of many of the company’s natural ingredients, and strong support of employee volunteerism. *The Body Shop* name had become synonymous with social activism and global preservation worldwide. With all of the above effective and suitable strategies plus its reliable high-quality products, the company had also become immensely profitable.

F By the mid-1990s, in order to increase competitiveness, The Body Shop began its first major advertising initiative, the most prominent part of which was the “Ruby” campaign. The campaign was personified by Ruby, a doll with Rubenesquer proportion, who was perched on an antique couch, looking quite pleased with herself and her plump frame. Randy Williamson, a spokesperson for The Body Shop, said, “Ruby is the fruit of our long-established practice of challenging the way the cosmetic industry talks to women. The Ruby campaign is designed to promote the idea that The Body Shop creates products designed to enhance features, moisturize, cleanse and polish, being totally opposite from the traditional pattern to correct ‘flaws’. The Body Shop philosophy is that there is real beauty in everyone. We are not claiming that our products perform miracles.”

G However, the flourishing entity was punched by a down turn suddenly and things turned out to be problematic. The Body Shop lost 30% of its original market share in the late 1990's to product-savvy competitors that offered similar cosmetics at lower prices. The main competitors are H2O, Sephora, Bath and Body Works, and Origins. The marketing branch of The Body Shop conducted a research, by the form of questionnaire and personal interview, to find out the cause of decreasing revenue. Research showed that women appreciated The Body Shop for its ethical standards. They were pleased by companies with green actions rather than empty promises. It also pointed out that The Body Shop had been put on the back burner in many people’s minds, which were overcrowded by newer and fresher brands. Companies like The Body Shop continually hype their products through advertising and marketing, often creating a demand for something where a real need for it does not exist. The message pushed is that the route to happiness is through buying more and more of their products. This plan could work well in 5 or 10 years ago, but in a competitive market like today, consumers will definitely give up the product and turn to seek for next favourite brand. Other downfall factors also include misleading the public with low Pay against unions and exploiting indigenous people. Worse still, in the process of mass production, packaging and transportation of huge quantities of goods is using up the world’s resources faster than they can be renewed and filling the land, sea and air with detrimental pollution and enormous waste.

H The Body Shop has used safe and timid advertising over the last decade, which unfortunately resulting in the reduction of both market share and brand value. With the rise of new, more natural and environmentally friendly competitors, The Body Shop can no longer stand behind being the greenest or most natural. Therefore, as the originator of ethical beauty, The Body Shop will firmly insist the tenet “actions speaking louder than words”. This is the new direction of this mature brand. It is hoping for a strong revival and the international market is waiting to see it.

Questions 28-31

Reading Passage 3 has eight paragraphs ***A-H***

Which paragraph contains the following information?

28. a management policy that connects corporate’s target with staff’s earnings

29. comparison between advertisements from The Body Shop and the conventional style

30. a social campaign that serves the purpose of environmental protection

31. a founding story of a humble origin and massive expansion

Questions 32-34

Choose the three correct letter, ***A-F***

What are *TRUE* about the Ben & Jerry's company management?

A They hand out complimentary products to employees.

B Personnel can get frozen food products for free.

C The policy of free pints of products is designed for workers to barter for other goods and services.

D The life insurance they offered is the three times as employee's annual salary.

E Employees are encouraged to give services back to the community.

F It provides a package of benefits for disabled workers.

Questions 35-37

Choose the three correct letter, A-F

What are the elements that resulted in the success for The Body Shop?

A The major market of targeting at rich women.

B It leads the trend of producing natural-ingredient products.

C The proposition of declining animal tests.

D Making donations to community and helping with backward nations.

E Launching lavish ads.

F The company avoided producing the traditional cosmetics products.

Questions 38-40

Choose the three correct letter, A-F

What are the possible reasons for the later failure of The Body Shop?

A The Ruby campaign failed to work.

B Low-quality products due to mass production.

C Its creation of demand for something that customers do not actually need.

D The company were faced with growing competition.

E Philosophy of the company is wrong.

F Failing to fulfill its promises which acted like misguiding the public.

B	**F**	**E**	**D**	**AEF**
BCD	**CDF**			

READING PASSAGE 2

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

Questions 14-19

Reading Passage 2 has six paragraphs A-F.

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

List of Headings
i IBM's successful experience of saving cost
ii Huge financial investment of E-learning

iii Major advantage for the application of E-training
iv Preference for multimedia by corporate administration
v Other benefits besides economic consideration
vi The distance learners outperformed the traditional university learners in worldwide
vii Advantages over traditional style considering the perspective of human
viii Rise of a mixed learning style
ix Drawbacks of implementing E-learning

14 Paragraph A
15 Paragraph B
16 Paragraph C
17 Paragraph D
18 Paragraph E
19 Paragraph F

E-training

The vast movement towards e-learning is clearly motivated by the many benefits it offers. However much e-learning is praised and innovated, computers will never completely eliminate human instructors and other forms of educational delivery. What is important is to know exactly what e-learning advantages exist and when these outweigh the limitations of the medium.

A E-learning is the unifying term to describe the fields of online learning, web-based training, and technology-delivered instruction, which can be a great benefit to corporate e-learning. IBM, for instance, claims that the institution of its e-training program, Basic Blue, whose purpose is to train new managers, saved the company in the range of $200 million in 1999, cutting the travel expenses required to bring employees and instructors to a central classroom accounts for the lion's share of the savings. With an online course, employees can learn from any Internet. connected PC, anywhere in the world. Ernst and Young reduced training costs by 35 percent while improving consistency and stability.

B In addition to generally positive economic benefits, other advantages such as convenience, standardized delivery, self-paced learning, and variety of available content, have made e-learning a high priority for many corporations. E-learning is widely believed to offer flexible "any time, any place" learning. The claim for "any place" is valid in principle and is a great development. Many people can engage with rich learning materials that simply were not possible in a paper or broadcast distance learning era. For teaching specific information and skills, e-training holds great promise. It can be especially effective at helping employees prepare for IT certification programs. E-learning also seems to effectively address topics such as sexual harassment education, safety training and management training-all areas where a clear set of objectives can be identified. Ultimately, training experts recommend a "blended" approach that combines both online and in-person training as the instruction requires. E-learning is not an end-all solution. But if it helps decrease costs and windowless classrooms filled with snoring students, it definitely has its advantages.

C Much of the discussion about implementing e-learning has focused on the technology, but as Driscoll and others have reminded us, e-learning is not just about the technology, but also many

human factors. As any capable manager knows, teaching employees new skills is critical to a smoothly running business. Having said that, however, the traditional route of classroom instruction runs the risk of being expensive, slow and, sometimes, ineffective. Perhaps the classroom's greatest disadvantage is the fact that it takes employees out of their jobs. Every minute an employee is sitting in a classroom training session is a minute they’re not on the floor working. It now looks as if there is a way to circumvent these traditional training drawbacks. E-training promises more effective teaching techniques by integrating audio, video, animation, text and interactive materials with the intent of teaching each student at his or her own pace. In addition to higher performance results, there are other immediate benefits to students such as increased time on task, higher levels of motivation, and reduced test anxiety for many learners. A California State University Northridge study reported that e-learners performed 20 percent better than traditional learners. Nelson reported a significant difference between the mean grades of 406 university students earned in traditional and distance education classes, where the distance learners outperformed the traditional learners.

D On the other hand, nobody said E-training technology would be cheap. E-training service providers, on the average, charge from $10,000 to $60,000 to develop one hour of online instruction. This price varies depending on the complexity of the training topic and the media used. HTML pages are a little cheaper to develop while streaming-video presentations or flash animations cost more. Course content is just the starting place for cost. A complete e-learning solution also includes the technology platform (the computers, applications and network connections that are used to deliver the courses). This technology platform， known as a learning management system (LMS), can either be installed onsite or outsourced. Add to that cost the necessary investments in network bandwidth to deliver multimedia courses, and you’re left holding one heck of a bill. For the LMS infrastructure and a dozen or so online courses, costs can top $500,000 in the first year. These kinds of costs mean that customized e-training is, for the time being, an option only for large organizations. For those companies that have a large enough staff, the e-training concept pays for itself. Aware of this fact, large companies are investing heavily in online training. Today,over half of the 400-plus courses that Rockwell Collins offers are delivered instantly to its clients in an e-learning format, a change that has reduced its annual training costs by 40%. Many other success stories exist.

E E-learning isn’t expected to replace the classroom entirely. For one thing， bandwidth limitations are still an issue in presenting multimedia over the Internet. Furthermore, e-training isn’t suited to every mode of instruction or topic. For instance, it’s rather ineffective imparting cultural values or building teams. If your company has a unique corporate culture
it would be difficult to convey that to first time employees through a computer monitor. Group training sessions are more ideal for these purposes. In addition, there is a perceived loss of research time because of the work involved in developing and teaching online classes. Professor Wallin estimated that it required between 500 and 1,000 person-hours, that is, Wallin-hours, to keep the course at the appropriate level of currency and usefulness (Distance learning instructors often need technical skills, no matter how advanced the courseware system). That amounts to between a quarter and half of a person-year. Finally, teaching materials require computer literacy and access to equipment. Any e-learning system involves basic equipment and a minimum level of computer knowledge in order to perform the tasks required by the system. A student that does not possess these skills, or have access to these tools, cannot succeed in an e-learning

program. (This test is offered by IELTS break up master, www.ysfsds.com)

F While few people debate the obvious advantages of e-learning, systematic research is needed to confirm that learners are actually acquiring and using the skills that are being taught online, and that e-learning is the best way to achieve the outcomes in a corporate environment. Nowadays, a go-between style of the blended learning, which refers to a mixing of different learning environments, is gaining popularity. It combines traditional face-to-face classroom methods with more modern computer-mediated activities. According to its proponents, the strategy creates a more integrated approach for both instructors and learners. Formerly, technology-based materials played a supporting role to face-to-face instruction. Through a blended learning approach, technology will be more important.

Questions 20-23

Reading Passage 2 has six paragraphs, A-F.

Which paragraph contains the following information?

20 An account of a fast electronic delivery for a company’s products to its customers.

21 E-learning gains recognition from many enterprises for its flexibility.

22 Description of the success of project Basic Blue.

23 The combination of the traditional and e-training environments may prevail.

Questions 24-26

Choose THREE correct letters among A-E.

What are the drawbacks of applying E-training?

A More time and labour are required to keep the course at the suitable level.

B Employees may spend a long time sitting in a training session instead of working.

C It is not suitable for conveying unique corporate values to fresh staff.

D The effect of multimedia may be affected by restricted bandwidth.

E Technical facilities are hardly obtained.

iii	**v**	**vii**	**ii**	**ix**
viii	**D**	**B**	**A**	**F**
ACD				

READING PASSAGE 2

You should spend about 20 minutes on Questions 15-27, which are based on Reading Passage 3 below.

Quantitive Research in Education

A The first area of criticism concerns the extent to which the results of “scientific” educational research are valid. Piaget carried out a number of experiments on the basis of which he developed the idea that children go through different stages of development, and that only when they have reached the necessary stage of development can they carry out the most advanced forms of cognitive operation. A famous experiment of his required children to compare the amount of liquid held by different shaped containers. The containers had the same capacity, and even when young children were shown that the same amount of liquid could be poured between the two containers, many claimed that one was larger than the other. Piaget's interpretation of

this was that the children were unable to perform the logical task involved in recognizing that the two containers, while different in shape, were the same in capacity: this being because their cognitive development had not reached the necessary stage. Critics of his work have questioned this conclusion, for instance, Donaldson. They raise the possibility that the children were simply unwilling to play the experimenter's game, or that the children misunderstood what the experimenter was asking. These criticisms point to the fact obvious enough, but important in its implications that experiments are social situations in which interpersonal interactions take place.

B Similar criticisms have been applied to psychological and educational tests. For example, Mehan points out how test questions may be interpreted in ways different from those intended by the researcher: in all language development test, children are presented with a picture of a medieval fortress, complete with moat, drawbridge, and parapets and three initial consonants: D, C, and G. The child is supposed to circle the correct initial consonant, C for "castle" is correct, but many children choose D. After the test, when I asked those children what the name of the building was, they responded "Disneyland". These children used the same line of reasoning intended by the tester, but they arrived at the wrong substantive answer. The score sheet showing a wrong answer does not document a child's lack of reasoning ability, it only documents that the child indicated an answer different from the one the tester expected.

C Here we have questions being raised about the validity of the sort of measurements on which the findings of quantitative research are typically based. Some, for example, Donaldson, regard these as technical problems that can be overcome by more rigorous experimentation. Others, however, including Mehan, believe them to be not simply problems with particular experiments or tests, but serious threats to validity that potentially affect all research of this kind.

D At the same time questions have also been raised about the assumption built into the "logic" of quantitative educational research that causes can be identified by physical and/or statistical manipulation of variables. Critics suggest that this fails to take account of the very nature of human social life. Social life, it is suggested, is much more contextually variable and complex.

E Such criticisms of quantitative educational research have been the stimulus for an increasing number of education researchers, over the past thirty or forty years, to adopt more qualitative approaches. These researchers have generally rejected attempts to measure and control variables experimentally or statistically.

F Qualitative research can take many forms. Loosely indicated by such terms as "ethnography", "case study", "participant observation". "life history", "unstructured interviewing", "discourse analysis", etc. In general, though, it has the following characteristics: a strong emphasis on exploring the nature of particular educational phenomena, rather than setting out to test hypotheses about them. A tendency to work with "unstructured data": that is, data that have not been coded at the point of collection in terms of a closed set of analytical categories. When engaging in observation, qualitative researchers therefore audio-or video-record what happens or write detailed open-ended field—notes, rather than coding behaviour in terms of a predefined set of categories, as would a quantitative researcher employing "systematic observation". Similarly, when interviewing, open-ended questions will be asked rather than questions requiring predefined answers of the kind typical, for example, of postal questionnaires. In fact, qualitative interviews are often designed to be close in character to casual conversations.

G Typically, a small number of cases will be investigated in detail, rather than any attempt being made to cover a large number, as would be the case in most quantitative research, such as

systematic observational studies or social surveys. The analysis of the data involves explicit interpretations of the meanings and functions of human actions, and mainly takes the form of verbal descriptions and explanations. Quantification and statistical analysis play a subordinate role at most. The two areas of educational research where criticism of quantitative research and the development of qualitative approaches initially emerged most strongly where the sociology of education and evaluation studies. The trend towards qualitative research in the sociology of education began in the UK in the 1960s with studies of a boys' grammar school, a boys' secondary modern school, and girls' grammar school by Lacey, Hargreaves and Lambart. They employed an ethnographic or participant observation approach, though they also collected some quantitative data on, for example, friendship patterns among the pupils. The researchers observed lessons, interviewed teachers and pupils, and drew on school records. They studied the schools for relatively long periods, spending many months collecting data and tracing changes over time.

Questions 15-18

*Look at the following statements (Question **15-18**) and the list of people below.*

Match each person with the correct statement.

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

A Piaget
B Mehan
C Donaldson

15. A wrong answer indicates more of a child's different perspective than incompetence in reasoning.

16. Logical reasoning involving in the experiments is beyond children's cognitive development.

17. Children's reluctance to comply with game rules or miscommunication may lie in another explanation.

18. Kinds of experiments or test are flawed essentially and will not justify by a more rigorous approach.

Questions 19-23

Complete the summary below.

*Choose **ONE WORD ONLY** from the Passage for each answer.*

Quantitative research in education has sparked debate that whether it is 19____in scientific area. Piaget's experiment involved children's steps on development, which used equal amount of 20____in a couple of containers, to test if student would be able to judge their size. Another quantitative research, which involved language development exams, was carried outby 21_____, he showed children a 22_____, and then requested children to make answers, but ultimately most of them failed. In 1960s, another method emerged along with quantitative research, 23____in the UK were taken as experiment sites in application of the combined approach.

Questions 24-26

Choose ***THREE*** correct statements of "Quanlitative research" features below:

A Work with well-organised data in a closed set of analytical categories.

B Record researching situations and apply note taking.

C Design the interview in an atmosphere like easy conversation.

D Questionnaires full with data instead of details.

E Questionnaires requiring open-ended answers.

F Code behaviour in terms of a predefined set of categories.

Questions 27

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

27 What is the main idea of this passage?

A to educate children that quantitative research are most applicable.

B to illustrate the society lack of deep comprehension of educational approach.

C to explain ideas and characteristics of quantitative research and qualitative research.

D to imply that qualitative research is flawless method compared with quantitative one.

B	**A**	**C**	**B**	**valid**
liquid	**Mehan**	**picture**	**schools**	**B**
E	**C**	**C**		

Malaria in Italy

A Everybody now knows that malaria is carried by mosquitoes. But in the 19th century, most experts believed that the disease was produced by “miasma” or “unclean air”. Others mad a link between swamps, water and malaria, but did not make the further leap towards insects. The consequences of these theories were that little was done to combat the disease before the end of the century. Things became so bad that I I m Italians (from a total population of 25 m) were “permanently at risk”. In malarial zones the life expectancy of land workers was a terrifying 22.5 years. Those who escaped death were weakened or suffered from splenomegaly-a “painful enlargement of the spleen” and “a lifeless stare”. The economic impact of the disease was immense. Epidemics were blamed on southern Italians, given the widespread belief that malaria was hereditary. In the 1880s, such theories began to collapse as the dreaded mosquito was identified as the real culprit.

B Italian scientists, drawing on the pioneering work of French doctor AlPhonse Laveran, were able to predict the cycles of fever but it was in Rome that f that key discoveries were made. Giovanni Battista Grassi, a naturalist, found that a particular type of mosquito was the carrier of malaria. By experimenting on healthy volunteers (mosquitoes were released into rooms where they drank the blood of the human guinea pigs), Grassi was able to make the direct link between the insects (all females of a certain kind) and the disease. Soon, doctors and scientists made another startling discovery: the mosquitoes themselves were also infected and not mere carriers. Every year, during the mosquito season, malarial blood was moved around the population by the insects. Definitive proof of these new theories was obtained after an extraordinary series of experiments in Italy, where healthy people were introduced into malarial zones but kept free of mosquito bites-and remained well. The new Italian state had the necessary information to tackle the disease.

C A complicated approach was adopted, which made use of quinine-a drug obtained from tree bark which had long been used to combat fever, but was now seen as a crucial part of the war on malaria. Italy introduced a quinine law and a quinine tax in 1904, and the drug was administered

to large numbers of rural workers. Despite its often terrible side-effects (the headaches produced were known as the “quinine-buzz”)the drug was successful in limiting the spread of the disease, and in breaking cycles of infection. In addition, Italy set up rural health centres and invested heavily in education programmes. Malaria, as Snowden shows, was not just, a medical problem, but a social and regional issue, and could only be defeated through multi-layered strategies. Politics was itself transformed by the anti-malarial campaigns.

D It was originally decided to give quinine to all those in certain regions-even healthy people; peasants were often suspicious of medicine being forced upon them. Doctors were sometimes met with hostility and refusal, and many were dubbed “poisoners”. Despite these problems, the strategy was hugely successful. Deaths from malaria fell by some 80% in the first decade of the 20th century and some areas escaped altogether from the scourge of the disease.

E Shamefully, the Italian malaria expert Alberto Missiroli had a role to play in the disaster: he did not distribute quinine, despite being well aware of the epidemic to come. Snowden claims that Missiroli was already preparing a new strategy-with the support of the US Rockefeller Foundation-using a new pesticide, DDT. Missiroli allowed the epidemic to spread, in order to create the ideal conditions for a massive, and lucrative， human experiment. Fifty-five thousand cases of malaria were recorded in the province of Littoria alone in 1944. It is estimated that more than a third of those in the affected area contracted the disease. Thousands，nobody knows how many, died.

F With the war over, the US government and the Rockefeller Foundation were free to experiment. DDT was sprayed from the air and 3 m Italians had their bodies covered with the chemical. The effects were dramatic, and nobody really cared about the toxic effects of the chemical. By 1962, malaria was more or less gone from the whole peninsula． The last cases were noted in a poor region of Sicily. One of the final victims to die of the disease in Italy was the popular cyclist, Fausto Coppi. He had contracted malaria in Africa in 1960, and the failure of doctors in the north of Italy to spot the disease was a sign of the times. A few decades earlier, they would have immediately noticed the tell-tale signs; it was later claimed that a small dose of quinine would have saved his life. (This test is offered by IELTS break up master, www.ysfsds.com)

G As there are still more than I m deaths every year from malaria worldwide. Snowden’s book also has contemporary relevance. This is a disease that affects every level of the societies where it is rampant. As Snowden writes: “In Italy malaria undermined agricultural productivity, decimated the army, destroyed communities and left families impoverished.” The economic miracle of the 50s and 60s which made Italy into a modern industrial nation would not have been possible without the eradication of malaria. Moreover, this book convincingly argues that the disease was “an integral part of the big picture of modern Italian history.” This magnificent study, beautifully written and impeccably documented, deserves an audience beyond specialists in history, or in Italy. It also provides us with “a message of hope for a world struggling with the great present-day medical emergency.”

Questions 1-4

Complete the following summary of the paragraphs of Reading Passage 1. Use ***NO MORE THAN TWO WORDS*** *from the Reading Passage for each answer.*

Malaria was a key issue for medical expert in the past. It was well-acknowledged that there were potential link with mosquitoes and 1_____. In 19 century the majority of experts did not realize that 2_____wasn't the real cause. In Italy, the 3_____of people from infected zone was as low as 22.5 years. It was even once attributed to the southern Italians, claimed that malaria was 4_____All above hypotheses were denied finally and real cause emerged.

Questions 5-8

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

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 Wrong perspectives slowed the development of fighting malaria in the end of 19 century.

6 Volunteers in Grassi experiments were from all parts of Italy.

7 Mosquitoes were just carriers of Malaria instead of being infected themselves.

8 Fighting malaria was an issue which needs efforts from combined strategies.

Questions 9-14

Reading passage 1 has seven paragraphs, A—G.

Which paragraph contains the following information?

9 A scientist intentionally failed to distribute medicines

10 Implication of the story for today's readers

11 A breakthrough unveiled the secrete of Malaria

12 Final case reported to die of malaria in Italy

13 The side—effect of the highly effective drug

14 Hypotheses of causes in history were cited

unclean air	**insect**	**life expectancy**	**hereditary**	**YES**
NOT GIVEN	**NO**	**YES**	**E**	**G**
B	**F**	**C**	**A**	

Biomimetic Design

A “Its back is completely drenched!” Sure enough, after 30 seconds, water from the dish had wicked up the lizard's leg and was glistening all on its prickly hide. In a few seconds more the water reached its mouth, and the lizard began to smack its jaws with evident satisfaction. It was, in essence, drinking through its foot. Given more time, the thorny devil can perform this same

conjuring trick on a patch of damp sand---a vital competitive advantage in the desert. Parker had come here to discover precisely how it does this, not from purely biological interest, but with a concrete purpose in mind: to make a thorny-devil-inspired device that will help people collect lifesaving water in the desert. “The water's spreading out incredibly fast!” he said, as drops from his eyedropper fell onto the lizard's back and vanished, like magic. “Its skin is far more hydrophobic than I thought. There may well be hidden capillaries, channeling the water into the mouth.”

B Parker's work is only a small part of an increasingly vigorous, global biomimetics movement. Engineers in Bath, England, and West Chester, Pennsylvania, are pondering the bumps on the leading edges of humpback whale flukes to learn how to make airplane wings for more agile flight. Architects in Zimbabwe are studying how termites regulate temperature, humidity, and airflow in their mounds in order to build more comfortable buildings, while Japanese medical researchers are reducing the pain of an injection by using hypodermic needles edged with tiny serrations, like those on a mosquito's proboscis, minimizing nerve stimulation.

C Ronald Fearing, a professor of electrical engineering at the University of California, Berkeley, has taken on one of the biggest challenges of all: to create a miniature robotic fly that is swift, small, and maneuverable enough for use in surveillance or search-and-rescue operations. Fearing made his own, one of which he held up with tweezers for me to see, a gossamer wand some 11 millimeters long and not much thicker than a cat’s whisk. Fearing has been forced to manufacture many of the other minute components of his fly in the same way, using a micro-machining laser and a rapid prototyping system that allows him to design his minuscule parts in a computer, automatically cut and cure them overnight, and assemble them by hand the next day under a microscope.

D With the micro-laser he cuts the fly’s wings out of a two-micron polyester sheet so delicate that it crumples if you breathe on it and must be reinforced with carbon-fiber spars. The wings on his current model flap at 275 times per second-faster than the insect's own wings---and make the blowfly's signature buzz. “Carbon fiber outperforms fly chitin,” he said, with a trace of self-satisfaction. He pointed out a protective plastic box on the lab bench, which contained the fly-bot itself, a delicate, origami-like framework of black carbon-fiber struts and hairlike wires that, not surprisingly, looks nothing like a real fly. A month later it achieved liftoff in a controlled flight on a boom. Fearing expects the fly-bot to hover in two or three years, and eventually to bank and dive with fly like virtuosity.

E Stanford University roboticist Mark Cutkosky designed a gecko-inspired climber that he christened Stickybot. In reality, gecko feet aren't sticky---they're dry and smooth to the touch---and owe their remarkable adhesion to some two billion spatula-tipped filaments per square centimeter on their toe pads, each filament only a hundred nanometers thick. These filaments are so small, in fact, that they interact at the molecular level with the surface on which the gecko walks, tapping into the low-level van der Waals forces generated by molecules’ fleeting positive and negative charges, which pull any two adjacent objects together. To make the toe pads for Stickybot, Cutkosky and doctoral student Sangbae Kim, the robot’s lead designer, produced a urethane fabric with tiny bristles that end in 30-micrometer points. Though not as flexible or adherent as the gecko itself,they hold the 500-gram robot on a vertical surface.

F Cutkosky endowed his robot with seven-segmented toes that drag and release just like the lizard's, and a gecko-like stride that snugs it to the wall. He also crafted Stickybot's legs and feet

with a process he calls shape deposition manufacturing (SDM), which combines a range of metals, polymers, and fabrics to create the same smooth gradation from stiff to flexible that is present in the lizard's limbs and absent in most man-made materials. Then he noticed in a paper on gecko anatomy that the lizard had branching tendons to distribute its weight evenly across the entire surface of its toes. Eureka: “When I saw that, I thought, Wow, that's great!” He subsequently embedded a branching polyester cloth “tendon” in his robot's limbs to distribute its load in the same way.

G Stickybot now walks up vertical surfaces of glass, plastic, and glazed ceramic tile, though it will be some time before it can keep up with a gecko. For the moment it can walk only on smooth surfaces, at a mere four centimeters per second, a fraction of the speed of its biological role model. The dry adhesive on Stickybot's toes isn't self-cleaning like the lizard's either, so it rapidly clogs with dirt. “There are a lot of things about the gecko that we simply had to ignore,” Cutkosky says. Still, a number of real-world applications are in the offing. The Department of Defense's Defense Advanced Research Projects Agency (DARPA), which funds the project, has it in mind for surveillance: an automaton that could slink up a building and perch there for hours or days, monitoring the terrain below. Cutkosky hypothesizes a range of civilian uses. “I'm trying to get robots to go places where they've never gone before” he told me. “I would like to see Stickybot has a real-world function. Whether it's a toy or another application. Sure, it would be great if it eventually has a lifesaving or humanitarian role.”

H For all the power of the biomimetics paradigm, and the brilliant people who practice it, bio-inspiration has led to surprisingly few mass-produced products and arguably only one household word—Velcro, which was invented in 1948 by Swiss chemist George de Mestral, by copying the way cockleburs clung to his dog's coat. In addition to Cutkosky's lab, five other high-powered research teams are currently trying to mimic gecko adhesion, and so far none has come close to matching the lizard's strong, directional, self-cleaning grip. Likewise, scientists have yet to meaningfully re-create the abalone nanostructure that accounts for the strength of its shell, and several well-funded biotechnology companies have gone bankrupt trying to make artificial spider silk.

Questions 15-21

Do the following statements agree with the information given in the Reading Passage3?

TRUE *if the statement agrees with the information*
FALSE *if the statement contradicts the information*
NOT GIVEN *if there is no information on this*

15 Water collecting device which can be used in desert was invented by Andrew parker.

16 The skin of lizard is not waterproof at all.

17 New afflatus derived from nature have been applied into many artificial engineering.

18 Spatula-tipped filaments of on gecko's toe pads make it possible to stick to other things.

19 The viscous substances released from its feet enable gecko to climb downward.

20 Successful products of biomimetics enlighten by famous cases are very common in real life.

21 Velcro is well-known for its bionics design.

Questions 22-27

Complete the sentences below.

*Write **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each blank.*

22. A protective plastic box containing things that are analogous to framework of _____ made by specialized techniques.

23. The robotic fly’ s main structure outside is made of_____make it unlike fly at all.

24. An artificial material was applied in Stickybot’ s _____ pressure in the same way as lizard.

25. Without the_____function of it's toes, the Stickybot quickly clogs with dirt and is only able to walk on smooth surface.

26. Stickybot is used for_____ in DARPA's plan.

27. In Cutkosky's assumption, Stickybot will finally have further development in_____or other human-related activities.

NG	**F**	**T**	**F**	**NG**
F	**T**	**the same way**	**carbon-fibre**	**limbs**
Self-cleaning	**surveillance**	**lifesaving**		

Proto-Writing

A Ice Age Symbol: the stencilled hand and red dots on a boulder shown opposite are probably 20, 000 years old. They were made in a cave at Pech Merle, in Lot, in southern France. Numerous examples of Ice Age painting and drawing—on cave walls and on objects—have turned up in southern France over the last century or so, some of which carry unexplained signs. Is all this writing? If we mean—is it part of a “system of graphic symbol that can be used to convey any and all thought”—then the answer is no. Let us call the Ice Age signs and other forms of partial writing “proto-writing”. Endless varieties of “proto-writing” exist, coming from all periods, including our own age.

B Tallies: tallies are among the oldest types of proto-writing. Ice age bones have been discovered bearing series of neat notches. Microscopic examination suggests that the notches were made with various tools over a period of time. A plausible explanation is that the bones are lunar notations: by keeping track of the phase of the moon, Ice Age humans created useful calendars.

C Inca Quipus The inca civilization is a celebrated exception to the general picture which emerges, of empires requiring writing. There is no script of the Incas, unlike the Aztecs and the Maya. Instead, a knotted arrangement of rope and cords called a “quipu” kept track of the movement of goods in the Inca empire, Quipus were the sole bureaucratic recording device of the Incas; it was the job of the “quipucamayocs”, or knot keepers, in each town, to tie and interpret the knot records. The system worked well, and was retained for some time after the arrival of the Spanish “conquistadores” in the 16th century. “Guaman Poma de Ayala” is a inca imperial clerk with a quipu, and quipu from Peru. There were many types of knot in a quipu, each type representing a value in a decimal system.

D Amerindian Pictograms: the above pictograms were “written” in 1883 by the chief of the Oglala Sioux, at the behest of the US Indian agent in Dakota Territory. They list warriors. Their names are given by the signs above their heads, for instance, the Bear-Spares-Him, Iron-Hawk, Red-Horn. Bull, Charging-Hawk, Wears-the-feature and Red-Crow. There are also a very few example of pictographic “letters” sent by American Indian. Quote marks around the word letter are necessary, because the "letters" are not true letters: they are more like secret code letters

that can be understand only by those ‘in the know’.

E This letter was the work of a Cheyenne man called *Turtle-Following-His-Wife* and was addressed to his son Little-Man. It said that he was sending his son $53 represented by 53 little circles and asking him to return home. The letter was mailed by Turtle-Following-His-Wife, but the money was given to Agent Dyer with an explanation of the letter's meaning. Dyer sent the money and a covering explanation to Agent McGillycuddy, so that the agent was able to hand over the money to Little-man on presentation of his father's letter. Presumably father and son had agreed on a letter in a similar style before the son had gone away from his father.

F Other Pictographs of Siberian Love Letter: a glance tells us that we cannot make much sens of this document, simply by studying its constituent shapes and interrelationships, the explanation is as follows. The conifer-shaped objects represent people. Conifer c is the writer (female), conifer b the addressee (male), who was formerly the writer's lover but is now living with conifer a, a Russian woman, away from the Yukaghir village. This has naturally disrupted the relationship between the writer and the addressee, hence the line x from the head of the Russian woman which cuts through the line joining b and c. But the a-b menage is a stormy one, and the writer is unhappy alone in here house, she is still thinking of the addressee.

G It is a charming design, once explained, which was, not surprisingly, seduced many willing scholars into thinking it a true letter, an example of lanuage-free pictographic communication. But this is fallacy. Recent careful investigation of original Russian sources has revealed that the “letter” was really a sort of Yukaghir party game with songs, cut into birchbark by a love-lorn girl. As she carved, other young Yukaghir would gather round, banter with her,and try to guess the meaning. This was made much easier by the fact that everyone knew each other. The "letter" was never designed to be sent; its contents were conveyed orally to the addressee, either by the girl herself or by someone else.

H Clay Tokens: excavation in the middle east have yield, besides clay tablets, large numbers of small, nondescript clay objects. According to the stratigraphy of the excavations, the objects date from 8,000 BC to as late as 1,500 BC, though the number of finds dated after 3,000 BC tails off. No one knows their purpose for sure. The most probable explanation is that they were counting units in accountancy. Different shapes could have been used for different entities, such as a sheep from a flock, or a specified measure of a certain product, such as a bushel of grain. The number and variety of shapes could have been extended so that no one object of a particular shape could stand for, ten sheep or a hundred sheep, or black sheep as opposed to white ones.

I Clay Envelopes: the most interesting finds of clay tokens are those in which the tokens have been enclosed in a clay envelope, generally shaped as a ball and known as a “bulla”, the outer surface has been sealed, and impressions have been made in its surface, which sometimes correspond to the contents. There are some 80 bullae known to exist with tokens intact: picked up and shaken, they rattle X-rayed, they reveal the outlines of tokens within. A few bullae have been opened, while others have been found broken during excavation and the contents dispersed without proper records. But despite the limited evidence, certain conclusions can be drawn.

Questions 1-7

Use the information in the passage3 to match the type of proto-writing with correct information each contains below.

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

A	Tallies
B	Inca Quipus
C	Amerindian Pictograms
D	Other Pictographs

1 Operation of trained worker.

2 Music and songs.

3 Knowledge of nature.

4 The writing of correspondence.

5 Record of numbers.

6 Family relationship.

7 Courtship and romantic story.

Questions 8-13

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

8. There is still no satisfying answer about when and where human's writing started.

9. Inca Quipus were recorded in the field of buying and selling.

10. Inca Empire has more advanced writing system than Aztecs and Maya.

11. Inca Quipus were handled by a group of special workers to record.

12. Not only pictogram expert investigated pictograms but people from other field participated Amerindian pictograms research.

13. During excavation，researchers found that most clay envelopes were preserved well.

B	**D**	**A**	**C**	**B**
C	**D**	**FALSE**	**TRUE**	**NOT GIVEN**
TRUE	**NOT GIVEN**	**FALSE**		

Optimism: The Key to a Good Life

A Faced with 12 months of plummeting economics and rising human distress, staunchly maintaining a rosy view might seem deucedly Pollyannaish. But here we encounter the optimism paradox. As Brice Pitt, an emeritus professor of the psychiatry of old age at Imperial College, London, told me: optimists are unrealistic. Depressive people see things as they really are, but that is a disadvantage from an evolutionary point of view. Optimism is a piece of evolutionary equipment that carried us through millennia of setbacks.

B It has been known that optimistic has something to do with the long life, and optimists have plenty to be happy about. In other words, if you can convince yourself that things will get better, the odds of it happening will improve—because you keep on playing the game. In this light, optimism “is a habitual way of explaining your setbacks to yourself”, reports Martin Seligman, the psychology professor and author of Learned Optimism. The research shows that when times get tough, optimists do better than pessimists—they succeed better at work, respond better to

stress, suffer fewer depressive episodes and achieve more personal goals.

C Studies also show that belief can help with the financial pinch. Chad Wallens, a social forecaster at the Henley Centre who surveyed middle-class Britons' beliefs about income, has found that "he people who feel wealthiest, and those who feel poorest, actually have almost the same amount of money at their disposal. Their attitudes and behaviour patterns, however, are different from one another."

D Optimists have something else to be cheerful about—in general, they are more robust. For example, a study of 660 volunteers by the Yale University psychologist Dr Becca Levy, found that thinking positively adds an average of 7 years to your life. Other American research claims to have identified a physical mechanism behind this. A Harvard Medical School study of 670 men found that the optimists have significantly better lung function. The lead author, Dr Rosalind Wright, believes that attitude somehow strengthens the immune system. "Preliminary studies on heart patients suggest that, by changing a person's outlook, you can improve their mortality risk," she says.

E Few studies have tried to ascertain the proportion of optimists in the world. But a 1995 nationwide survey conducted for the American magazine Adweek found that about half the population counted themselves as optimists, with women slightly more apt than men (53 per cent versus 48 per cent) to see the sunny side.

F Although some optimists may be accurate in their positive beliefs about the future, others may be unrealistic—their optimism is misplaced, according to American Psychological Association. Research shows that some smokers exhibit unrealistic optimism by underestimating their relative chances of experiencing disease. An important question is whether such unrealistic optimism is associated with risk-related attitudes and behavior. We addressed this question by investigating if one's perceived risk of developing lung cancer over and above one's objective risk, predicted acceptance of myths and other beliefs about smoking. Hierarchical regressions showed that those individuals who were unrealistically optimistic were more likely to endorse beliefs that there is no risk of lung cancer if one only smokes for a few years and that getting lung cancer depends on one's genes.

G Of course, there is no guarantee that optimism will insulate you from the crunch's worst effects, but the best strategy is still to keep smiling and thank your lucky stars. Because (as every good sports coach knows) adversity is character-forming—so long as you practise the skills of resilience. Research among tycoons and business leaders shows that the path to success is often littered with failure: a record of sackings, bankruptcies and blistering castigations. But instead of curling into a foetal ball beneath the coffee table, they resiliently pick themselves up, learn from their pratfalls and march boldly towards the next opportunity. The American Psychological Association defines resilience as the ability to adapt in the face of adversity, trauma or tragedy. A resilient person may go through difficulty and uncertainty,but he or she will doggedly bounce back.

H The American Psychological Association defines resilience as the ability to adapt in the face of adversity, trauma or tragedy. A resilient person may go through difficulty and uncertainty, but he or she will doggedly bounce back.

I Optimism is one of the central traits required in building resilience, say Yale University investigators in the Annual Review of Clinical Psychology. They add that resilient people learn to hold on to their sense of humour and this can help them to keep a flexible attitude when big

changes of plan are warranted. The ability to accept your lot with equanimity also plays an important role, the study adds.

J One of the best ways to acquire resilience is through experiencing a difficult childhood， the sociologist Steven Stack reports in the *Journal of Social Psychology*. For example, short men are less likely to commit suicide than tall guys, he says, because shorties develop psychological defence skills to handle the bullies and mickey—taking that their lack of stature attracts. By contrast, those who enjoyed adversity-free youths can get derailed by setbacks later on because they’ve never been inoculated against ago.

K Learning to overcome your fears. If you are handicapped by having had a happy childhood, then practising proactive optimism can help you to become more resilient. Studies of resilient people show that they take more risks; they court failure and learn not to fear it. And despite being thick-skinned, resilient types are also more open than average to other people. Bouncing through knock backs is all part of the process. It’s about optimistic risk-taking—being confident that people will like you. Simply smiling and being warm to people can help. It’s an altruistic path to self-interest—and if it achieves nothing else, it will reinforce an age-old adage: hard times can bring out the best in you.

Questions 27-31

Complete the summary below.

*Choose **NO MORE THAN TWO WORDS** from the Passage 3 for each answer.*

Optimists generally are more robust. Yale University psychologist Dr Becca Levy found that an extension of around 27_____to your life will be achieved by positive attitude toward life. A Harvard Medical School conducted a research which studied 28_____ male volunteers and found that the optimists had remarkably better 29____. And Dr Rosalind Wright believes optimistic life may enhance the 30_____. Some initiative studies on 31_____ indicate that people can improve their mortality risk by changing into a positive outlook.

Questions 32-36

Look at the following statements (Questions 32-36) and the list of people below.

Match each statement with the correct person, A—G.

A Brice Pitt
B American Psychological Association
C Martin Seligman
D Chad Wallens of Henley Centre
E Annual Review of Clinical Psychology
F Steven Stack
G American magazine Adweek

32 Different optimism result found according to gender.

33 There is no necessary relationship between happiness and money.

34 Excessive optimism may be incorrect in everyday life.

35 Optimists is advantageous for human evolution.

36 Occurrence of emergency assists resilient people in a positive way.

Questions 37-40

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

37 The link between longevity and optimism has been long known.

38 Optimists have better personal relationship than pessimists.

39 People who have good childhood do not need to practice optimism.

40 Experience of difficulties will eventually accumulate the best fortune.

7 years	**670**	**lung function**	**immune system**	**heart patients**
G	**D**	**B**	**A**	**E**
YES	**NG**	**NO**	**YES**	

Bamboo, A Wonder plant

Bamboos are some of the faster-growing plants in the word, due to a unique rhizome-dependent system Bamboos are of notable economic and cultural significance in South Asia, Southeast Asia and East Asia, being used for building materials, as a food source, and as a versatile raw product. Urgent action is needed to protect one of the world's most ancient life forms and the species that depend on it.

The wonder plant with an uncertain future：more than a billion people rely on bamboo for either their shelter or income, while many endangered species depend on it for their survival. Despite its apparent abundance, a new report says that species of bamboo may be under serious threat.

Section A

Every year ‘during the rainy season, the mountain gorillas of Central Africa migrate to the foothills and lower slopes of the Virunga Mountains to graze on bamboo. For the 650 or so that remain in the wild，it’s a vital food source. Although there are almost 150 types of plant, as well as various insects and other invertebrates, at this time of the year bamboo accounts for up to 90 per cent of their diet. Without it, says lan Redmond, chairman of the Ape Alliance, their chances of survival would be reduced significantly. Gorillas aren't the only locals keen on bamboo. For the people who live close to the Virungas, it's a valuable and versatile raw material used for building houses and making household items such as mats and baskets. But in the past 100 years or so, resources have come under increasing pressure as populations have exploded and large areas of bamboo forest have been cleared to make way for farms and commercial plantations.

Section B

Sadly, this isn’t an isolated story. All over the world, the ranges of many bamboo species appear to be shrinking, endangering the people and animals that depend upon them. But despite bamboo’s importance, we know surprisingly little about it. A recent report published by the UN Environment Programme (UNEP) and the International Network for Bamboo and Rattan (INBAR) has revealed just how profound is our ignorance of global bamboo resources, particularly in relation to conservation. There are almost 1,600 recognised species of bamboo, but the report concentrated on the 1,200 or so woody varieties distinguished by the strong stems, or culms, that most people associate with this versatile plant. Of these, only 38‘priority species’identified for their commercial value have been the subject of any real scientific research, and this has focused mostly on matters relating to their viability as a commodity. This problem isn't confined to bamboo. Compared to the work carried out on animals, the science of assessing the conservation status of plants is still in its infancy.“People have only started looking hard at this during the past 10-15 years, and only now are they getting a handle on how to go about it Systematical y,” says Dr. Valerie Kapos, one of the report’s authors and a senior adviser in forest ecology and conservation to the UNER.

Section C

Bamboo is a type of grass. It comes in a wide variety of forms, ranging in height from 30 centimetres to more than 40 metres. It is also the world's fastest-growing woody plant; some species can grow more than a metre in a day. Bamboo’s ecological rote extends beyond providing food and habitat for animals. Bamboo tends to grow in stands made up of groups of individual plants that grow from root systems known as rhizomes. Its extensive rhizome systems, which tie in the top layers of the soil, are crucial in preventing soil erosion. And there is growing evidence that bamboo plays an important part in determining forest structure and dynamics.“Bamboo’s pattern of mass flowering and mass death leaves behind large areas of dry biomass that attract wildfire,”says Kapos.“When these-bum, they create patches of open ground within the forest far bigger than would be left by a fallen tree.” Patchiness helps to preserve diversity because certain plant species do better during the early stages of regeneration when there are gaps in the canopy. (This test is offered by IELTS break up master, www.ysfsds.com)

Section D

However, bamboo’s most immediate significance lies in its economic value. Modern processing techniques mean that it can be used in a variety of ways, for example, as flooring and laminates. One of the fastest growing bamboo products is paper-25 per cent of paper produced in India is made from bamboo fiber, and in Brazil, 100,000 hectares of bamboo are grown for its production. Of course, bamboo's main function has always been in domestic applications, and as a locally traded commodity it's worth about US $4.5billion annually. Because of its versatility, flexibility and strength (its tensile strength compares to that of some steel) it has traditionally been used in construction. Today, more than one billion people worldwide live in bamboo houses. Bamboo is often the only readily available raw material for people in many developing countries，says Chris Stapleton, a research associate at the Royal Botanic Gardens.“Bamboo can be harvested from forest areas or grown quickly Elsewhere, and then converted simply without expensive machinery or facilities,” he says.“In this way, it contributes substantially to poverty alleviation and wealth creation.”

Section E

Given bamboo's value in economic and ecological terms, the picture painted by the UNEP report is all the more worrying. But keen horticulturists will spot an apparent contradiction here. Those who’ ve followed the recent vogue for cultivating exotic species in their gardens will point out that if it isn't kept in check, bamboo can cause real problems. “In a lot of places, the people who live with bamboo don’ t perceive it as being endangered in any,” says Kapos. “In fact, a lot of bamboo species are actually very invasive if they’ ve been introduced.” So why are so many species endangered? There are two separate issues here, says Ray Townsend, vice president of the British Bamboo Society and arboretum manager at the Royal Botanic Gardens. “Some plants are threatened because they can't survive in the habitat-they aren’ t strong enough or there aren’ t enough of them, perhaps. But bamboo can take care of itself-it is strong enough to survive if left alone. What is under threat is its habitat.” It is the physical disturbance that is the threat to bamboo, says Kapos. “ When forest goes, it is converted into something else: there isn’ t any-where for forest plants such as bamboo to grow if you create a cattle pasture.”

Section F

Around the world, bamboo species are routinely protected as part of forest eco-systems in national parks and reserves, but there is next to nothing that protects bamboo in the wild for its own sake. However, some small steps are being taken to address this situation. The UNEP-INBAR report will help conservationists to establish effective measures aimed at protecting valuable wild bamboo species. Townsend, too, sees the UNEP report as an important step forward in promoting the cause of bamboo conservation. “Until now, bamboo has been perceived as a second-class plant. When you talk about places such as the Amazon, everyone always thinks about the hardwoods. Of course these are significant, but there is a tendency to overlook the plants they are associated with, which are often bamboo species. In many ways, it is the most important plant known to man.”

Questions 1-7

Reading Passage 1 has six sections A—F.

Which section contains the following information?

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

1 The distinction of the bamboo and other plant species

2 Bamboo’ s commercial application

3 Poorly attention to scientific researches of bamboo

4 Large-scale destruction of bamboo caused by human activities

5 How bamboos are put to a variety of uses

6 Contributions of bamboo to the surrounding plants

7 Selection criteria about experiment subjects of bamboo

Questions 8-11

Use the information in the passage to match the people(1isted A-D)with opinions or deeds below.

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

A Ian Redmond
B Valerie Kapos
C Ray Townsend
D Chris Stapleton

8 Destroying bamboo poses threat to wildlife.

9 People lack the full knowledge of bamboo.

10 Some people underestimate the extinction degree of bamboo.

11 Bamboo’s commercial potentials could prove invaluable over time.

Questions 12-13

*Answer the questions below using **NO MORE THAN TWO WORDS** from the passage for each answer.*

12 What is the environment issue refrained from root system of bamboo?

13 Which bamboo product receives the growing popularity?

E	**D**	**B**	**A**	**D**
C	**B**	**A**	**B**	**B**
D	**soil erosion**	**paper**		

Children’s Literature

“Literature serves an important in our society, for children shaping their reality about themselves and others based on much of what they read. Student’ attitudes, values, and beliefs are influenced by children’s literature”.

A It can be broadly defined as anything that children read or more specifically defined as fiction, non-fiction, poetry, or drama intended for and used by children and young people. Stories and poems aimed at children have an exceedingly long history：lullabies, for example, were sung in Roman times, and a few nursery games and rhymes are almost as ancient. Yet so far as written-down literature is concerned, while there were stories in print before 1700 that children often seized on when they had the chance, such as translations of Aesop's fables, fairy-stories and popular ballads and romances, these were not aimed at young people in particular. Since the only genuinely child-oriented literature at this time would have been a few instructional works to help with reading and general knowledge, plus the odd Puritanical tract as an aid to morality, he only course for keen child readers was to read adult literature. This still occurs today, especially with adult thrillers or romances that include more exciting, graphic detail than is normally found in the literature for younger readers.

B By the middle of the 18th century there were enough eager child readers, and enough parents glad to cater to this interest, for publishers to specialize in children’s books whose first aim was pleasure rather than education or morality. In Britain, a London merchant named Thomas Boreham produced Cajanus, the Swedish Giant, in 1742, while the more famous John Newbery published A Little Pretty Pocket Book in 1744. Its contents—rhymes, stories, children’s games plus a free gift (‘A ball and a pincushion’)—in many ways anticipated the similar lucky-dip contents of children’s annuals this century. It is a tribute to Newbery’s flair that he hit upon a winning formula quite so quickly, to be pirated almost immediately in America.

C Such pleasing levity was not to last. Influenced by Rousseau, whose *Emile* (1762) decreed that

all books for children save Robinson Crusoe were a dangerous diversion, contemporary critics saw to it that children's literature should be instructive and uplifting. Prominent among such voices was Mrs. Sarah Trimmer, whose magazine *The Guardian of Education* (1802) carried the first regular reviews of children's books. It was she who condemned fairy-tales for their violence and general absurdity: her own stories, Fabulous Histories(1786) described talking animals who were always models of sense and decorum.

D So the moral story for children was always threatened from within, given the way children have of drawing out entertainment from the sternest moralist. But the greatest blow to the improving children's book was to come from an unlikely source indeed: early 19th-century interest in folklore. Both nursery rhymes, selected by James Orchard Halliwell for a folklore society in 1842, and collection of fairy-stories by the scholarly Grimm brothers, swiftly translated into English in 1823, soon rocket to popularity with the young, quickly leading to new editions, each one more child-centered than the last. From now on younger children could expect stories written for their particular interest and with the needs of their own limited experience of life kept well to the fore.

E What eventually determined the reading of older children was often not the availability of special children's literature as such but access to books that contained characters, such as young people or animals, with whom they could more easily empathize, or actions, such as exploring or fighting, that made few demands on adult maturity or understanding.

F The final apotheosis of literary childhood as something to be protected came with the arrival in the late 1930s of child-centered best-sellers intend on entertainment at its most escapist. In Britain novelist such as Enid Blyton and Richmal Crompton described children who were always free to have the most unlikely adventures, secure in the knowledge that nothing bad could ever happen to them in the end. The fact that war broke out again during her books' greatest popularity fails to register at all in the self-enclosed world inhabited by Enid Blyton's young characters. Reaction against such dream-words was inevitable after World War II, coinciding with the growth of paperback sales, children's libraries and a new spirit of moral and social concern. Urged on by committed publishers and progressive librarians, writers slowly began to explore new areas of interest while also shifting the settings of their plots from the middle-class world to which their chiefly adult patrons had always previously belonged.

G Critical emphasis, during this development, has been divided. For some the most important task was to rid children's books of the social prejudice and exclusiveness no longer found acceptable. Others concentrated more on the positive achievements of contemporary children's literature. That writers of these works are now often recommended to the attentions of adult as well as child readers echoes the 19th century belief that children's literature can be shared by the generations, rather than being a defensive barrier between childhood and the necessary growth towards adult understanding. For example, J.K. Rowling's Harry Potter series was originally written and marketed for children, but it was so popular among children and adults that The New York Times created a separate bestseller list. Often no consensus is reached whether a given work is best categorized as adult or children's literature, and many books are marketed for both adults and children.

Questions 15-19

Complete the table below.

Choose ***NO MORE THAN TWO WORDS*** from Reading Passage 2 for each answer.

DATE	FEATURES	AIM	EXAMPLE
Before 1700	Not aimed at young children	Education and morality	Puritanical tract
By the middle of 18th century	Consisted of rhymes **15**___and games	Read for pleasure	Spread to 16___
Early 19thcentury	New trend concerning to 17___	To be more children centered	Nursery rhymes and 18___
Late 1930s	Stories of harm-free 19___	Entertainment	Enid Blyton and Richmal Crompton’s novels

Questions 20-22

Look at the following people and the list of statements below.

Match each person with the correct statement.

20 Thomas Boreham

21 Mrs. Sarah Trimmer

22 Grimm Brothers

List of Statements
A criticized the violence existed in children’s literature
B used animals to demonstrate the absurdity of fairy tales
C did not write books for a living when his giant came out
D translated a book into English
E did not write the original edition of his book in English

Questions 23-27

Do the following statements agree with the information given in Reading Passage 2?

TRUE *if the statement agrees with the information*

FALSE *if the statement contradicts the information*

NOT GIVEN *if there is no information on this*

23 Children only have chance to read stories after 1700.

24 Sarah Trimmer thought that children’s book should instruct children to be positive and nice.

25 Parents care about the violence in children literature.

26 Interest in folklore is growing.

27 It is believed that children’s literature should be popular with both children and adults.

stories	America	folklore	fairy-stories	adventures
C	A	E	FALSE	TRUE
NOT GIVEN	TRUE	TRUE		

Tasmanian Tiger?

“Danger” says the sign on the door of a laboratory at the Australian Museum in Sydney: “Tasmanian Tiger, trespassers will be eaten!” The joke is that the Tasmanian tiger-a beloved symbol of the island state that appears on its license plate-has extinct for nearly seven decades. But researchers behind that door are working to bring the animal back to life by cloning it, using DNA extracted from specimens preserved decades ago. Among other things, the work raises questions about the nature of extinction itself.

A The Tasmanian tiger's Latin designation, Thylacinus cynocephalus, or “dog-headed pouched-dog,” makes it redundantly clear that the marsupial’s feline nickname is a misnomer. Yet its striped coat was cat-like, which runs nearly shoulder to tail. The animal had large, powerful jaws, which secured the predator a place atop the local food chain. Females carried their young in backward-facing pouches. Thylacines, once spread throughout mainland Australia and as far north as New Guinea, were probably outcompeted for food by the dingoes that humans introduced to the area some 4,000 years ago, says Australian Museum director Mike Archer, founder of the cloning project. Eventually, thylacines remained only on the dingo-free island of Tasmania, south of the mainland. But with the arrival of European settlers in the 1800s, the marsupial’s days were numbered. Blamed (often wrongly) for killing livestock, the animals were hunted indiscriminately. The government made thylacines a protected species in 1936, but it was too late. It was a frigid winter night in 1936. A lone Tasmanian tiger huddled in his-or her-open enclosure at Hobart Zoo. With nowhere to shelter from the cold and no keepers to care, the delicately striped animal died. When this solitary animal-whose sex was not even recorded because of lack of interest-died, so did an entire species with the last specimen reportedly died in captivity the same year. What's more, with the passing into extinction of the Tasmanian tiger, Thylacinus cynocephalus, it was the end of the line for an entire family of marsupials that had lived in Australia for millions of years.

B The Australian researchers set out to bring the animal back partly to atone for humanity’s role in its extinction, Archer says. The idea took root 15 years ago when he saw a pickled thylacine pup in the museum’s collection. “It jarred me and started me thinking,” recalls the 58-year-old paleontologist and zoologist. “DNA is the recipe for making a creature. So if there is DNA preserved in the specimen，why shouldn’t we begin to use technology to read that information, and then in some way use that information to reconstruct the animal? I raised the issue with a geneticist. The response was derisive laughter.”

C Then, in 1996, Dolly the sheep burst onto the scene and, suddenly Archer says, “cloning wasn’t just a madman’s dream”. Dolly proved that DNA from an ordinary animal cell-in her case, a ewe’s udder-could generate a virtually identical copy, or clone. Archer’s goal is even more ambitious: cloning an animal with DNA from long-dead cells, reminiscent of the science fiction novel and movie Jurassic Park. The challenge lies in the DNA that makes up the chromosomes in which genes are bundled falls apart after a cell dies.

D Researchers working with Don Colgan, head of the museum’s evolutionary biology department, extracted DNA from a thylacine pup preserved in alcohol in 1866, and biologist

Karen Firestone obtained additional thylacine DNA from a tooth and a bone. Then, using a technique called polymerase chain reaction, the researchers found that the thylacine DNA fragments could be copied. The scientists next have to collect millions of DNA bits and pieces and Create a ‘‘library” of the possibly tens of thousands of thylacine genes-a gargantuan task, they concede. Still, an even greater obstacle looms, that of stitching all those DNA fragments together properly into functioning chromosomes. Until now, no scientist has ever synthesized a mammalian chromosome from scratch．If the Aussie scientists accomplish those feats，they may try to generate a thylacine by placing the synthetic chromosomes into a treated egg cell of a related species-say, a Tasmanian devil, another carnivorous marsupial, and implant the egg in a surrogate mother.

E Such cross-species cloning, as the procedure is called, is no longer fantasy. In 2001, Advanced Cell Technology (ACT) of Worcester, Massachusetts, succeeded in cloning, for the first time, an endangered animal, a rare wild ox called a gaur. This past April, scientists from ACT, Trans Ova Genetics of Sioux Center, Iowa, and the Zoological Society of San Diego announced they had cloned a banteng, an endangered wild bovine species native to Southeast Asia, using a domesticated cow as a surrogate mother．Meanwhile，researchers in Spain are trying to clone an extinct mountain goat, called a bucardo, using cells collected and frozen before the species’ last member died in 2000.

F Many scientists are skeptical of the thylacine project. lan Lewis, technology development manager at Genetics Australia Cooperative Ltd., in Bacchus Marsh, Victoria, Australia, says the chances of cloning an animal from “snippets” of DNA are “fanciful”. Robert Lanza, ACT’s medical director and vice president, says cloning a thylacine is beyond existing science. But it may be within reach in several years, he adds: “This area of genetics is moving forward at an exponential rate.” (This test is offered by IELTS break up master, www.ysfsds.com)

G In Australia, critics say the millions of dollars that the thylacine project will Cost would be better spent trying to save endangered species and disappearing habitats. One opponent, Tasmanian senator and former Australia Wilderness Society Director Bob Brown, says people might become blase about conservation if they’re lulled into thinking a lost species can always be resurrected. The research “feeds the mind-set that science will fix everything,” he says. Another concern touches on the great nature-nurture quandary: Would a cloned thylacine truly represent the species, given that it would not have had the chance to learn key behaviors from other thylacines? For some carnivores, says University of Louisville behavioral ecologist Lee Dugatkin, “it’s clear that young individuals learn various hunting strategies from parents.” And a foster parent might not fill the gap. Dugatkin asks whether a cloned Tasmanian tiger raised by a surrogate Tasmanian devil would just be a devil in tiger’s clothing.

H But Archer says, in effect, a thylacine is a thylacine, however its DNA blueprint is obtained, because much animal behavior, including that of marsupials, is genetically hard wired or instinctual. “We take kittens and raise them with humans, but they still behave like cats,” he points out. And Archer, who envisions nature preserves populated by cloned thylacines and their offspring, says the project is actually a boon to conservation: it shows what it takes just to

contemplate resurrecting a vanished species. For now, Archer and coworkers are trying to piece together the thylacine’s exact genetic makeup.

Questions 1-6

Complete the following summary of the paragraphs of Reading Passage 1, using ***NO MORE THAN THREE WORDS*** *from the Reading Passage 1 for each answer.*

The Thylacinus cynocephlus, or the Tasmanian tiger, is a dog-headed-pouched-dog while with a cat-like **1**_____, covering from head to tail. It used to dominate and live extensively in the continent of **2**____ in ancient times. However, when dingoes arrived this place approximately **3**____ago, thylacines lost their territories and afterwards only survived in **4**____with not any dingo existing there. Later, suspecting that the thylacines may hunting their domestic animals, **5**_____ gave orders to get rid of them. In the year of 1936, the last specimen died **6**____ representing the extinction of both the Tasmanian tiger and an entire marsupial family.

Questions 7-12

Use the information in the passage to match the people, listed ***A-F,*** *with opinions ordeeds below.*

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

A Mike Archer
B Don Colgan and Karen Firestone
C Ian Lewis
D Robert Lanza
E Bob Brown
F Lee Dugatkin

List of Statements

7 Conservation endeavour may be doubted if misconception that everything can be revived prevails.

8 The foster parent can’t teach the young their necessary survival skills.

9 Scientists nowadays want to reconstruct the extinct animal and make up for the guilt humans made.

10 Cloning an animal from fragments of DNA is bound to fail by current-day science yet hold a future.

11 The duplication of thylacine DNA fragments is feasible.

12 A cloned Tasmanian tiger brought up by a surrogate Tasmanian devil would preserve its own nature.

Questions 13-14

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

13 Which of the animal has not been cloned as mentioned in the passage?

A A wild bovine called a banteng.
B A sheep called Dolly.
C A mammoth called a bucardo.
D An ox called a gaur.

14 What is the main idea of this article?

A To come up with some reasons about how Tasmanian could have survived.

B To present the development process of cloning technology.

C To show what controversy in science concerning the cloning.

stripped coat	Australia	4000years	Tasmania	European
captivity	E	F	A	D
B	A	C	D	

Multitasking Debate

Can You Do Several Tasks 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, 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 René 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.

C The trouble comes when Marois shows the volunteers an image, 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 a 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 one 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.

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 aging affects our cognitive abilities, we peak in our 20s. 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 multitaskers.

Questions 1-5

Reading Passage 1 has ten paragraphs A-J.

Which paragraph contains the following information?

1 a theory explained delay happens when selecting one reaction

2 different age groups respond to important things differently

3 conflicts happened when visual and audio elements emerge simultaneously

4 an experiment designed to demonstrate blocks for multitasking

5 a viewpoint favors optimistic side of multitasking performance

Questions 6-8

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

6 Which one is correct about experiment conducted by René Marois?

A Participants performed poorly on listening task solely.

B Volunteers pressed different keys on different colors.

C Participants needed to use different fingers on different colored objects.

D They did a better job on mixed images and sound information.

7 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.

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

A People can execute dual-task just after several attempts.

B Practice can overcome dual-task interference.

C Meyer holds a different opinion on Marois' s theory.

D An existing processor decides whether delay another task or not.

Question 9-13

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

YES *if the statement agrees with the information*
NO *if the statement contradicts the information*
NOT GIVEN *if there is no information on this*

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

10 People tend to ignore the differences when presented two similar images.

11 Marois has different opinions on the claim that training removes bottleneck effect.

12 Multitasking performance has correlation with gender according to Art Kramer.

13 Author doesn' t believe that practice could bring any variation.

F	**I**	**C**	**B**	**G**
C	**B**	**A**	**YES**	**YES**
NO	**NG**	**NO**		

Lose your weight

The field of weight loss is like the ancient fable about the blind men and the elephant. Some say obesity is largely predetermined by our genes and biology; others attribute it to an

overabundance of fries, soda, and screen-sucking; still others think we're fat because of viral infection, insulin, or the metabolic conditions we encountered in the womb. "Everyone subscribes to their own little theory," says Robert Berkowitz, medical director of the Center for Weight and Eating Disorders at the University of Pennsylvania School of Medicine. (This test is offered by IELTS break up master, www.ysfsds.com)

But within this fractured tableau, a few patterns now stand out clearly. A consensus is emerging that the conventional wisdom—eat less, exercise more—is inadequate at best. A quick look at our collective waistline makes it painfully clear the old equation—calories in minus calories out equals weight change—is fundamentally flawed. We're programmed to hang onto the fat we have, and some people are predisposed to create and carry more fat than others. "It's not as simple as 'You're fat because you're lazy,'" says Nikhil Dhurandhar, an associate professor at Pennington Biomedical Research Center in Baton Rouge. "Willpower is not a prerogative of thin people. It's distributed equally."

Section A.

The command center for the body's weight-management system resides in the hypothalamus—and it's calibrated to favor the preservation, rather than the elimination, of fat.That's accomplished through the hormone leptin, a crucial player in the brain's weight-management circuitry. Leptin is produced by the body's fat cells and signals the brain to regulate appetite and satiety—and, therefore, weight. If you lose body fat and leptin, it triggers hunger and the urge to eat; if you gain fat and increase leptin, you eat less. But things don't always go according to plan. The regulatory system can go awry: Some people produce too little leptin; others become desensitized to it. And when obese people lose weight, their leptin levels plummet along with their metabolism. The body becomes more efficient at using fuel and conserving fat, which makes it tough to keep the weight off. Obese dieters' bodies go into a state of chronic hunger, a feeling Rudolph Leibel, an obesity researcher at Columbia University, compares to thirst. "Some people might be able to tolerate chronic thirst, but the majority couldn't stand it," says Leibel."Is that a behavioral problem—a lack of willpower? I don't think so." (This test is offered by IELTS break up master, www.ysfsds.com)

Section B

"Radical changes are necessary," says Deirdre Barrett, a psychologist at Harvard Medical School and author of Waistland. "People don't lose weight by choosing the small fries or taking a little walk every other day." Barrett suggests taking a cue from the members of the National Weight Control Registry (NWCR), a self-selected group of more than 5,000 successful weight-losers who have shed an average of 66 pounds and kept it off 5.5 years. Some registry members lost weight using low-car diets; some went low-fat; others eliminated refined foods. Some did it on their own; others relied on counseling.

That said, not everyone can lose 66 pounds and not everyone needs to. The goal shouldn't be getting thin, but getting healthy. It's enough to whittle your weight down to the low end of your set range, says Jeffrey Friedman, a geneticist at Rockefeller University. Losing even 10 pounds vastly decreases your risk of diabetes, heart disease, and high blood pressure. The point is to not give up just because you don't look like a swimsuit model. "We focus on appearance because

that's what everyone notices," says Friedman. "If there were no stigma, we wouldn't be worried about an unachievable goal. We'd just be worried about our health."

Section C

The negotiation between your genes and the environment begins on day one. Your optimal weight, writ by genes, appears to get edited early on by conditions even before birth, inside the womb. If a woman has high blood-sugar levels while she's pregnant, her children are more likely to be overweight or obese, according to a study of almost 10,000 mother-child pairs.

Maternal diabetes may influence a child's obesity risk through a process called metabolic imprinting, says Teresa Hillier, an endocrinologist with Kaiser Permanente's Center for Health Research and the study's lead author. The mother's high blood sugar may mean the baby in the womb gets overfed, possibly pre-programming it for obesity. Even mothers whose blood sugar was at the upper end of the normal range had elevated risks of having overweight babies

Section D

It's the $64,000 question: Which diets work? A yearlong government-funded study comparing Atkins, the Zone, Ornish, and LEARN (Lifestyle, Exercise, Attitudes, Relationships and Nutrition, based on the U.S. government's food pyramid) found all four work more or less, leading to short-term modest weight loss in overweight women. People on Atkins lost the most weight—an average of about 10 pounds— while participants on the other diets lost between 3.5 to 5.7 pounds on average.

Not exactly huge numbers. It got people wondering: Isn't there a better way to diet? Two months later another study seemed to offer an answer.The paper compared two groups of adults: those who, after eating, secreted high levels of insulin, a hormone that sweeps blood sugar out of the bloodstream and promotes its storage as fat, and those who secreted less. Within each group, half were put on a low-fat diet and half on a low-glycemic-load diet. On average, the low-insulin-secreting group fared the same on both diets, losing nearly 10 pounds in the first six months—but they gained about half of it back by the end of the 18-month study. The high-insulin group didn't do as well on the low-fat plan, losing about 4.5 pounds, and gaining back more than half by the end. But the most successful were the high-insulin-secretors on the low-glycemic-load diet. They lost nearly 13 pounds and kept it off.

Section E

In experiments, Dhurandhar found that SMAM-1-infected chickens became obese on the same diet as uninfected ones, which stayed svelte. He also found that nearly one in five overweight humans in his Bombay clinic showed antibodies—proving prior infection—and that they were about 33 pounds heavier than those never exposed.He later moved to the U.S. and onto a bona fide human virus, adenovirus 36 (AD-36).In the lab, every species of animal Dhurandhar infected with the virus became obese—chickens got fat, mice got fat, even rhesus monkeys at the zoo that picked up the virus from the environment suddenly gained 15 percent of their body weight upon exposure.

In his latest studies, Dhurandhar has isolated a gene that, when blocked from expressing itself,

seems to turn off the virus's fattening power. Stem cells extracted from fat cells and then exposed to AD-36 reliably blossom into fat cells—but when stem cells are exposed to an AD-36 virus with the key gene inhibited, the stems cells don't differentiate. The gene appears to be necessary and sufficient to trigger AD-36-related obesity, and the goal is to use the research to create a sort of obesity vaccine. (This test is offered by IELTS break up master, www.ysfsds.com)

Questions 1-4

*The reading passage 1 has sections **A**-**E.***

Which section contains the following information?

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

1 Description of variety ways of losing weight
2 Weight lost by radical exercise without bouncing back
3 The experiment on relative groups
4 Illusion of hungry appears while losing weight

Questions 5-9

Look at the following researchers and the list of findings below. Match each researcher with the correct finding.

A.Teresa Hillier	**B**.Robert Berkowitz	**C**.Nikhil Dhurandhar
D.Deirdre Barrett	**E**.Jeffrey Friedman	

5 Everyone has their own point of view about weight loss.
6 A person’s weight is predetermined to a set point by the DNA.
7 Small amount of daily exercise is useless for losing weight.
8 Testing on the relationship between the mother and the child's body weight
9 The four popular ways are more or less the same.

Questions 10-13

Complete the summery below.

*Choose **NO MORE THAN ONE WORD** from the passage for each answer.*

The young doctor who came up with the concept ‘infect obesity’ believed that the obesity is caused by a kind of gem, so he conducted experiment on 10_____ in Bombay clinic. Later he moved to America and tested on a new virus named 11_____. Although there seems no way to eliminate the virus, a kind of 12_____ can be applied to block the power of the virus. The doctor future focus aims at developing a new 13_____ to restrain the virus.

B	**B**	**D**	**A**	**B**
E	**D**	**A**	**C**	**antibodies**
AD-36	**cells**	**vaccine**		

What Do Babies Know

A As Daniel Haworth is settled into a high chair and wheeled behind a black screen, a sudden look of worry furrows his 9-month-old brow. His dark blue eyes dart left and right in search of the familiar reassurance of his mother's face. She calls his name and makes soothing noises, but Daniel senses something unusual is happening. He sucks his fingers for comfort, but, finding no solace, his mouth crumples, his body stiffens, and he lets rip an almighty shriek of distress. Mom picks him up, reassures him, and two minutes later, a chortling and alert Daniel returns to the darkened booth behind the screen and submits himself to Baby lab, a unit set up in 2005 at the University of Manchester in northwest England to investigate how babies think.

B Watching infants piece life together, seeing their senses, emotions and motor skills take shape, is a source of mystery and endless fascination — at least to parents and developmental psychologists. We can decode their signals of distress or read a million messages into their first smile. But how much do we really know about what's going on behind those wide, innocent eyes? How much of their understanding of and response to the world comes preloaded at birth? How much is built from scratch by experience? Such are the questions being explored at Babylab. Though the facility is just 18 months old and has tested only 100 infants, it's already challenging current thinking on what babies know and how they come to know it.

C Daniel is now engrossed in watching video clips of a red toy train on a circular track. The train disappears into a tunnel and emerges on the other side. A hidden device above the screen is tracing Daniel's eyes as they follow the train and measuring the diameter of his pupils 50 times a second. As the child gets bored — or "habituated", as psychologists call the process — his attention level steadily drops. But it picks up a little whenever some novelty is introduced. The train might be green, or it might be blue. And sometimes an impossible thing happens—the train goes into the tunnel one color and comes out another.

D Variations of experiments like this one, examining infant attention, have been a standard tool of developmental psychology ever since the Swiss pioneer of the field, Jean Piaget, started experimenting on his children in the 1920s. Piaget's work led him to conclude that infants younger than 9 months have no innate knowledge of how the world works or any sense of "object permanence" (that people and things still exist even when they're not seen). Instead, babies must gradually construct this knowledge from experience. Piaget's "constructivist" theories were massively influential on postwar educators and psychologists, but over the past 20 years or so they have been largely set aside by a new generation of ''nativist" psychologists and cognitive scientists whose more sophisticated experiments led them to theorize that infants arrive already equipped with some knowledge of the physical world and even rudimentary programming for math and language. Babylab director Sylvain Sirois has been putting these smart-baby theories through a rigorous set of tests. His conclusions so far tend to be more Piagetian: "Babies" he says, "know squat."

E What Sirois and his postgraduate assistant lain Jackson are challenging is the interpretation of a variety of classic experiments begun in the mid-1980s in which babies were shown physical events that appeared to violate such basic concepts as gravity, solidity and contiguity. In one such

experiment, by University of Illinois psychologist Renée Baillargeon, a hinged wooden panel appeared to pass right through a box. Baillargeon and M.I.T's Elizabeth Spelke found that babies as young as 31/2 months would reliably look longer at the impossible event than at the normal one. Their conclusion: babies have enough built-in knowledge to recognize that something is wrong.

F Sirois does not take issue with the way these experiments were conducted. "The methods are correct and replicable," he says. "It's the interpretation that's the problem." In a critical review to be published in the forthcoming issue of the European Journal of Developmental Psychology, he and Jackson pour cold water over recent experiments that claim to have observed innate or precocious social cognition skills in infants. His own experiments indicate that a baby's fascination with physically impossible events merely reflects a response to stimuli that are novel. Data from the eye tracker and the measurement of the pupils (which widen in response to arousal or interest) show that impossible events involving familiar objects are no more interesting than possible events involving novel objects. In other words, when Daniel has seen the red train come out of the tunnel green a few times, he gets as bored as when it stays the same color. The mistake of previous research, says Sirois, has been to leap to the conclusion that infants can understand the concept of an impossibility from the mere fact that they are able to perceive some novelty in it. "The real explanation is boring," he says.

G So how do babies bridge the gap between knowing squat and drawing triangles—a task Daniel's sister Lois, 21/2, is happily tackling as she waits for her brother? "Babies have to learn everything, but as Piaget was saying, they start with a few primitive reflexes that get things going," says Sirois. For example, hardwired in the brain is an instinct that draws a baby's eyes to a human face. From brain, imaging studies we also know that the brain has some sort of visual buffer that continues to represent objects after they have been removed-a lingering perception rather than conceptual understanding. So when babies encounter novel or unexpected events, Sirois explains, "there's a mismatch between the buffer and the information they're getting at that moment. And what you do when you've got a mismatch is you try to clear the buffer. And that takes attention." So learning, says Sirois, is essentially the laborious business of resolving mismatches. "The thing is, you can do a lot of it with this wet, sticky thing called a brain. It's a fantastic, statistical-learning machine". Daniel, exams ended, picks up a plastic tiger and, chewing thoughtfully upon its head, smiles as if to agree

Questions 14-18

Use the information in the passage to match the sentence with opinions or deeds of experts below (listed A-G).

A infants indeed have born with embed knowledge for a speech.
B adult's brain is functionally different from babies'.
C lack inherent understanding of external environment.
D was drawn from famous experiments initiated in the late 20th century.
E is simply an instinct rather than a full comprehension.
F take a while before the buffer is removed.
G expect the colors to change when the train come out of the tunnel.

14 Jean Piaget concluded that babies under 9 months old

15 Jean Piaget explained that baby's attention on an important spot

16 Other cognitive scientists' speech suggested

17 Sylvain Sirois opposed the opinion that

18 Sylvain Sirois interpreted babies' attention on mismatch

Questions 19-23

Do the following statements agree with the information given in Reading Passage 2?

YES	*if the statement agrees with the information*
NO	*if the statement contradicts with the information*
NOT GIVEN	*if there is no information on this*

19 Observations on infant's behavior are too ordinary to attract psychologists' attention.

20 Experiments on 100 infants at Babylab proved that the current understanding of infant's cognition is correct.

21 Parents often overestimate what their babies know.

22 Theories led by Piaget since 1920 was rejected by postwar expels and parents.

23 Sylvain Sirois's conclusion on infant's cognition is similar to Piaget's.

Questions 24-26

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

24 What can we know from the writer in Paragraph C?

A Daniel's attention level rose when he saw a blue train.

B Kid's attention fell when he were accustomed to the changes.

C Child's brain activity was monitored by a special equipment.

D Size of the train changed when it came out of the tunnel.

25 What can we know from the writer in Paragraph F?

A Kid is attracted by various colours of the trains all the time.

B Sirois accuses misleading approaches of current experiments.

C Sirois indicates that babies understand basic knowledge of novelty.

D Sirois suggests that response to novel attracts baby's attention.

26 What can we know from the writer in Paragraph G?

A Mismatch triggers clearance of buffer in babies' head.

B Wet substance of brain plays a role in learning practice.

C Function of buffer allows baby to understand the concept.

D The secrete of what babies know finally revealed.

C	**E**	**A**	**D**	**F**
NO	**NO**	**NG**	**NO**	**YES**
B	**D**	**A**		

Questions 27-32

Reading Passage 3 has 6 paragraphs, A-F. Choose the correct heading for paragraphs, A-F ,from the list of headings below.

List of Headings
i Introducing new management concepts to postwar era
ii Conception that stood the scrutiny of time
iii Early publications

iv Shifting the focus of management in modern manufactures
v Thinker and scholar with world-wide popularity
vi Drucker’s concepts are deficient
vii The shifting role of employees in management
viii Find fault with Drucker
ix Iconic view of ‘‘management by objectives”

27 Paragraph A
28 Paragraph B
29 Paragraph C
30 Paragraph D
31 Paragraph E
32 Paragraph F

Father of Modern Management

Peter Drucker (born in 1909) in known as a the father of modern management. As a prolific writer, business consultant and lecturer, he introduced many management concepts that have been embraced by corporations around the world.

A It's been said that Peter Drucker invented the discipline of management. Before he wrote his first book on the topic, he knew of only two companies in the world with management development programs. Ten years after the book's publication, 3,000 companies were teaching the subject. Widely considered as the father of “modern management” he wrote 39 books and countless scholarly and popular articles exploring how humans are organized in all sectors of society-business, government and the nonprofit world. His writings have predicted many of the major developments of the late twentieth century, including privatization and decentralization； the rise of Japan to a world economic power; the decisive importance of marketing; and the emergence of the information society with its necessity of lifelong learning.

B Drucker has said that writing is the foundation of everything he does. In 1937, he published his first book, which was written in Europe. The End of Economic Man: A Study of the New Totalitarianism examined the spiritual and social origins of fascism. In 1940, before the United States entered World War II, he wrote The Future of Industrial Man, in which he presented his social vision for the postwar world. In 1943, General Motors asked Drucker to study its management practices. Drucker accepted and spent 18 months researching and writing the 1945 book Concept of the Corporation.

C The concepts Drucker introduced in the 1940s and l950s have endured. In 1954, Drucker wrote his first book that taught people how to manage. Titled The Practice of Management, it introduced the concept of “management by objectives”. Management by objectives requires managers to establish goals for their subordinates and devise means of measuring results. Workers are then left alone to perform as they will and measure their performance. Drucker wrote, “It is not possible to be effective unless one first decides what one wants to accomplish.” He went on to explain that every worker must be given the tools “to appraise himself, rather

than be appraised and controlled from the outside" Management by objectives has become an accepted business concept and is probably Drucker's most important contribution. Drucker issued challenges to junior, middle and senior management: "The very term 'middle management' is becoming meaningless as some will have to learn how to work with people over whom they have no direct line control, to work transnationally, and to create, maintain, and run systems-none of which are traditionally middle management tasks." It is top management that faces the challenge of setting directions for the enterprise, of managing the fundamentals.

D Drucker interviewed executives and workers, visited plants, and attended board meetings. While the book focused on General Motors. Drucker went on to discuss the industrial corporation as a social institution and economic policy in the postwar era. He introduced previously unknown concepts such as cooperation between labor and management, decentralization of management, and viewing workers as resources rather than costs. Drucker saw people as a resource, and considered that they would be more able to satisfy customers if they had more involvement in their jobs and gained some satisfaction from doing them. Drucker claimed that an industrial society allows people to realize their dreams of personal achievement and equal opportunity-the need to manage business by balancing a variety of needs and goals，rather than subordinating an institution to a single value. This concept of management by objectives forms the keynote of his 1954 landmark The Practice of Management. He referred to decentralization as 'a system of local self-government, in which central management tells division managers what to do, but not how to do it. The young executives are given the freedom to make decisions-and mistakes-and learn from the experience. Top leaders at General Motors disliked the book and discouraged their executives from reading it. Many other American executives criticized his concept for its challenge to management authority.

E Drucker wasn't immune to criticism. The Wall Street Journal researched Several of his lectures in 1987 and reported that he was sometimes loose with facts. Drucker was off the mark, for example, when he told an audience that English was the official language for all employees at Japan's Mitsui trading company. And he was known for his prescience. Given the recent involvement of the us government with financial companies, he was probably correct in his forecast when he anticipated, for instance, that the nation's financial center would shift from New York to Washington. Others maintain that one of Drucker's core concepts-"management by objectives"-is flawed and has never really been proven to work effectively. Specifically, critics say that the system is difficult to implement, and that companies often wind up overemphasizing control, as opposed to fostering creativity, to meet their goals. Drucker didn't shy away from controversy, either.

F Throughout his career, Drucker expanded his position that management was "a liberal art" and he infused his management advice with interdisciplinary lessons including history, sociology, psychology, philosophy, culture and religion. He also strongly believed that all institutions, including those in the private sector, had a responsibility for the whole society. "The fact is?" Drucker wrote in 1973, "that in modern society there is no other leadership group but managers. If the managers of our major institutions, especially in business, do not take responsibility for the common good, no one else can or will." In his books, lectures and interviews, the emergence of

knowledge workers is only one of the demographic changes Drucker warns businesses to prepare for. Others include a decreasing birth rate in developed countries, a shift in population from rural to urban centers, shifts in distribution of disposable income and global competitiveness. Drucker believes these changes will have a tremendous impact on business. Drucker held a profound skepticism of macroeconomic theory and contended that economists of all schools fail to explain significant aspects of modem economies. Business “gurus” have come and gone during the last 50 years, but Drucker’s message continues to inspire managers. During the 1990s, Drucker wrote about social, political and economic changes of the “postcapitalist” era, which he says are as profound as those of the industrial revolution.

Questions 33-36

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

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

33 Drucker believed the workers should bear the equal position as the employers in a company.

34 Middle management tasks will change since companies have become more complex and run business globally.

35 Drucker pointed out that economists of schools are not capable of explaining the problems of modem economies at least in a macroeconomics scope.

36 Drucker’s conceptions proposed half a century ago have no effect on modem days.

Questions 37-38

Choose TWO letters from, A-E

Which TWO of the following are true of Drueker’s views?

A Managers should be responsible for the common good of the whole society.

B More stress should be laid on accelerating the development of the union.

C Young executives are encouraged to start from low level jobs.

D Management should facilitate workers with tools of self-appraisal and control them from the outside. (This test is offered by IELTS break up master, www.ysfsds.com)

E Management should go beyond a sole discipline as to combine many subjects into a whole.

Questions 39-40

Choose TWO letters from, A-E

Which TWO of the following are mentioned in the passage as criticisms to Drucker and his views?

A He was exaggerating the case for knowledge workers when warning businesses to get prepared.

B His lectures are too broad and lack of being precise and accurate about the facts.

C His concepts benefited corporate executives instead of average workers.

D His ideas are sometimes impractical and result in opposite outcomes.

E He did not show enough respect to Japanese employees when he said English was the official language for all employees at Japan’s Mitsui trading company.

v	**iii**	**ix**	**i**	**viii**
ii	**NOT GIVEN**	**TRUE**	**TRUE**	**FALSE**

AE	**BD**			

The Mozart Effect

The Mozart Effect is a hypothesis suggesting that ‘‘listening to Mozart makes you smarter’’ or that early childhood exposure to classical music has a beneficial effect on mental development. People keep on exploring the Mozart effect and make great achievements. However, the disputes never end.

A Music has been used for centuries to heal the body. In the Ebers Papyrs, one of the earliest medical documents, circa 1,500 B.C. , it was recorded that physicians chanted to heal the sick. In various cultures, we have observed singing as part of healing rituals. In the world of Western medicine, however, using music in medicine lost popularity until the introduction of the radio. Researchers then started to notice that listening to music could have significant physical effects. Therapists noticed music could help calm anxiety and researchers saw that listening to music could cause a drop in blood pressure. In addition to these two areas，music has been used with cancer chemotherapy to reduce nausea, during surgery to reduce stress hormone production, during childbirth, and in stroke recovery. It has been shown to decrease pain as well as enhance the effectiveness of the immune system. In Japan, compilations of music are used as medication of sorts. For example, if you want to cure a headache or migraine, the album suggested Mendelssohn's *Spring Song*, Dvorak's *Humoresque*, or part of George Gershwin's *An Animal in Paris*. Music is also being used to assist in learning, in a phenomenon called the Mozart Effect.

B Frances H. Rauscher, Ph. D. first demonstrated the correlation between music and learning in an experiment in 1993. His experiments indicated that a 10 minute dose of Mozart could temporarily boost intelligence. Groups of students were given intelligence tests after listening to silence, relaxation tapes, or Mozart’ s Sonata for Two Pianos in D Major for a short time. He found that after silence, the average IQ score was 110, and after the relaxation tape, scores rose a point. After listening to Mozart, however, the scores jumped to 119. Even students who did not like the music still had an increased score on the IQ test. Rauscher hypothesized that “listening to complex music, like Mozart, may stimulate neural pathways that are important in thinking”.

C The same experiment was repeated on rats by Rauscher and Hong Hua Li from Stanford. Rats also demonstrated enhancement in their intelligence performance. These new studies indicate that rats that were exposed to Mozart showed ‘‘increased gene expression of BDNF (a neural growth factor), CREB(a learning and memory compound)， and Synapsin I(a synaptic growth protein)”in the brain’s hippocampus, compared with rats in the control group, which heard only white noise(e.g. the whooshing sound of a radio tuned between stations).

D How exactly does the Mozart affect work? Researchers are still trying to determine the actual mechanisms for the formation of these enhanced learning pathways. Neuroscientists suspect

that music can actually help build and strengthen connections between neurons in the cerebral cortex in a process similar to what occurs in brain development despite its type. When a baby is born, certain connections have already been made-like connections for heartbeat and breathing. As new information is learned and motor skills develop, new neural connections are formed. Neurons that are not used will eventually die while those used repeatedly will from strong connections. Although a large number of these neural connections require experience, they also must occur within a certain time frame. For Example, a child born with cataracts cannot develop connections within the visual cortex. If the cataracts are removed by surgery right away, the child's vision develops normally. However, after the age of 2, if the cataracts are removed, the child will remain blind because those pathways cannot establish themselves.

E Music seems to work in the same way. In October of 1997, researchers at the University of Konstanz in Germany found that music actually rewires neural circuits. Although some of these circuits are formed for physical skills needed to play an instrument, just listening to music strengthens connection used in higher-order thinking. Listening to music can then be thought of as "exercise" for the brain, improving concentration and enhancing intuition.

F If you're a little skeptical about the claims made by supporters of the Mozart Effect, you're not alone. Many people accredit the advanced learning of some children who take music lessons to other personality traits, such as motivation and persistence, which is required in all types of learning. There have also been claims of that influencing the results of some experiments.

G Furthermore, many people are critical of the role the media had in turning an isolated study into a trend for parents and music educators. After Mozart Effect was published to the public, the sales of Mozart CDs stayed on the top of the hit list for three weeks. In an article by Michael Linton，he wrote that the research that began this phenomenon，the study by researchers at the University of California Irvine, showed only a temporary boost in IQ, which was not significant enough to even last throughout the course of the experiment. Using music to influence intelligence was used in Confucian civilization and Plato alluded to Pythagorean music when he described is ideal state in The Republic. In both of these examples, music did not have caused any overwhelming changes, and the theory eventually died out. Linton also asks, "If Mozart's Music were able to improve health, why was Mozart himself so frequently sick? If listening to Mozart's music increases intelligence and encourages spirituality, why aren't the world's smartest and most spiritual people Mozart specialists?" Linton raises an interesting point, if the Mozart Effect causes such significant changes, why isn't there more documented evidence?

H The "trendiness" of the Mozart Effect may have died out somewhat, but there are still strong supporters and opponents of the claims made in 1993. Since that initial experiment, there has not been a surge of supporting evidence. However, many parents, after playing classical music while pregnant or when their children are young，will swear by the Mozart Effect. A classmate of mine once told me that listening to classical music while studying will help with memorization. If we approach this controversy from a scientific aspect, although there has been some evidence that music does increase brain activity, actual improvements in learning and memory have not been adequately demonstrated.

Questions 14-18

Reading Passage 2 has eight paragraphs, A-H.

Which paragraph contains the following information?

14 Impacts of music to the development of baby’s brain.

15 Popularity of public to the introduction of Mozart Effect.

16 A pioneer experiment taken by a researcher.

17 Music is conductive to cure some diseases.

18 The opinion of contributing good leaning of children who access music to other factors.

Questions 19-21

*Complete the summary below. Choose from the passage using **ONE WORD ONLY** for each answer.*

(This test is offered by IELTS break up master, www.ysfsds.com)

In Frances Rauscher’s experiment, volunteers were immersed in the music for a 19_____ period of time before taking exams． He explained the outcome that the improvement of their performance is connected with 20_____feature of Mozart’s music． Besides, another parallel experiment was conducted on 21_____.

Questions 22-26

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

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

22 Music is probably beneficial to enhance the performance of brain according to experts.

23 The neural connections have not been developed until the baby is born.

24 The Mozart Effect is doubtless until now.

25 Michael Linton continued research on Mozart’s life experience to explain Mozart Effect.

26 Few proofs support Mozart Effect from the very first experiment till now.

D	**G**	**B**	**A**	**F**
short	**complex**	**rats**	**TRUE**	**FALSE**
FALSE	**NOT GIVEN**	**TRUE**		

Longaeva: Ancient Bristle Cone Pine

A To understand more about the Earth’s history, humans have often looked to the natural environment for insight into the past. The bristlecone pine (Pinus Longaeva), of the White Mountains in California has served this purpose greater than any other species of tree on the

planet. Conditions here are brutal: scant precipitation and low average temperatures mean a short growing season, only intensified by ferocious wind and mal-nutritious rocky soil. Nevertheless, bristlecone pines have claimed these barren slopes as their permanent home. Evolving here in this harsh environment, super-adapted and without much competition, bristlecones have earned their seat on the longevity throne by becoming the oldest living trees on the planet. Results of extensive studies on bristlecone pine stands have shown that in fact such, environmental limitations are positively associated with the attainment of great age. This intriguing phenomenon will be discussed further on. But exactly how old is it? Sprouted before the invention of Egyptian hieroglyphs and long before the teachings of Jesus of Nazareth. Dethuselah is the oldest bristlecone alive at roughly 4,700 years.

B Perhaps most interested in the bristlecone pine are dendochronologists, or tree-ring daters. With every strenuous year that passes in the White Mountains, each bristlecone grows and forms a new outer layer of cambium that reflects a season’s particular ease or hardship. So while, growing seasons may expand or shrink, the trees carry on, their growth rings faithfully recording the bad years alongside the goods. Through examining the annual growth rings of both living and dead specimens, taking thousands of core samples, and by processes of crossdating between trees and other qualitative records, scientists have compiled a continuous tree-ring record that dates back to the last Ice Age between eight and ten thousand years ago. Among other linked accomplishments， this record has enhanced the dating process, helping to double-check and correct the radiocarbon-4 method to more accurately estimate the age of organic material.

C Now more than ever the importance of monitoring the bristlecone is being realized. As our global climate continues to undergo its most recent and abrupt atmospheric change, these ancient scribes continue to respond. Since the rings of wood formed each year reveal the trees’ response to climatic conditions during a particular growing seasons in their persistence, they have left us natural recordings of the past, markers of the present, and clues to the future.

D The species’ name originates from the appearance of its unusual cones and needles. The bristlecone’s short, pale needles are also trademarks, bunching together to form foxtail-like bundles. As is the case of most conifer needles, these specialized leaves cluster together to shelter the stomata so very little moisture is lost through them. This adaptation helps the bristlecone photosynthesize during particularly brutal months, saving the energy of constant needle replacement and providing a stable supply of chlorophyll. For a plant trying to store so much energy bristlecone seeds are relatively large in size. They are first reproduced when trees reach ages between thirty and seventy-five years old. Germination rates are generally high, in part because seeds require little to no initial stratification. Perhaps the most intriguing physical characteristic of a mature bristlecone, however, is its ratio of living to dead wood on harsh sites and how this relates to old age. In older trees, however, especially in individuals over 1,500 years, a strip-bark trait is adaptive. This condition occurs as a result of cambium dieback, which erodes and thereby exposes certain areas of the bole, leaving only narrow bands of bark intact.

E The technique of cambial edge retreat has helped promote old age in bristlecone pine, but that certainly is not the only reason. Most crucial to these trees’ longevity is their compact size and slow rates of growth. By remaining in most cases under ten meters tall, bristlecones stay close to the limited water supply and can hence support more branches and photosynthesizing. Combined with the dry, windy, and often freezing mountain air, slow growth guarantees the bristlecones tight, fibrous rings with a high resin content and structural strength. The absence of

natural disaster has also safeguarded the bristlecone's lengthy lifespan. Due to a lack of ground cover vegetation and an evenly spaced layout, bristlecone stands on the White Mountain peaks have been practically unaffected by fire. This lack of vegetation also means a lack of competition for the bristlecones.

F Bristlecone pine's restricted to numerous, rather isolated stands at higher altitudes in the southwestern United States. Stands occur from the Rocky Mountains, through the Colorado Plateau, to the western margin of the Great Basin. Within this natural range, the oldest and most widely researched stands of bristlecones occur in California's White Mountains. Even just 200 miles away from the Pacific Ocean, the White Mountains are home to one of this country's few high, elevation deserts. Located in the extreme eastern rain shadow of the Sierra Nevada, this region receives only 12.54 inches of precipitation per year and experiences temperatures between -20 degrees Fahrenheit and +50 degrees Fahrenheit. The peaks south of the Owens Valley, are higher up than they might appear from a distance. Although most summits exist somewhere around 11,000 feet, snow-capped White Mountain Peak, for which the range is named, stands at 14,246 feet above sea level. That said to reach areas of pure bristlecone is an intense journey all to itself.

G With seemingly endless areas of wonder and interest, the bristlecone pines have become subject to much research over the past half-century. Since the annual growth of these ancient organisms directly reflects the climatic conditions of a particular time period, bristlecones are of greatest significance to dendochronologists, or tree-ring specialists. Dating any tree is simple and can be done within reasonable accuracy just by counting out the rings made each year by the plant's natural means of growth. By carefully compiling a nearly 10,000 year-old bristlecone pine record, these patient scientists have accurately corrected the carbon-14 dating method and estimated ages of past periods of global climate change. What makes this record so special to dendochronologists, too, is that, nowhere, throughout time, is precisely the same long-term sequence of wide and narrow rings repeated, because year-to-year variations in climate are never exactly the same.

H Historically the bristlecone's remote location and gnarled wood have deterred commercial extraction, but nothing on earth will go unaffected by global warming. If temperatures rise by only 6 degrees Fahrenheit, which many experts say is likely this century, about two thirds of the bristlecones' ideal habitat in the White Mountains effectively will be gone. Almost 30,000 acres of National Forest now preserves the ancient bristlecone, but paved roads, campsites, and self-guided trails have led only to more human impact. In 1966, the U.S.F.S reported over 20,000 visitors to the Ancient Bristlecone Pine Forest, a figure which could exceed 40,000 today. Over the past hundreds of thousands of years, this species has endured in one of earth's most trying environments; they deserve our respect and reverence. As global climate change slowly alters their environment, we as humans must do our part to raise awareness and lower our impact.

Questions 27-30

Reading Passage 3 has 8 paragraphs, A-H.

Which paragraph contains the following information?

27 disappear of bristlecone pines habitat due to human activity

28 explanations for ring of bristlecone pines

29 an reliable evidence from past till now

30 survived in cruel environment

Questions 31-33

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

31 According to Paragraph A, what aspect of bristlecone pines attracts author's attention?

A The sever conditions they live.

B Outstanding height.

C They only live in California.

D Remarkable long age.

32 Why do we investigate Bristlecone pines in higher altitudes of California's White Mountains?

A Because oldest ones are in this region.

B Because most bizarre ones are in this region.

C Because precipitation is rich in this region.

D Because sea level is comparatively high in this region.

33 Why there are repeated patterns of wide and narrow rings?

A Because sea level rises which affects tree ring.

B Because tree ring pattern is completely random.

C Because variation of climate change is completely different.

D Because ancient organisms affect its growth.

Questions 34-39

Complete the following summary of the paragraphs of Reading Passage 3, using ***NO MORE THAN THREE WORDS*** *for each answer.*

The bristlecone's special adaptation is benefit for photosynthesizing, and reserving the 34_____ of needle replacement and providing sufficient chlorophyll. Probably because seeds do not rely on primary 35_____, germination rate is high. Because of cambium dieback, only narrow 36_____ remain complete. Due to multiple factors such as windy, cold and 37_____, bristlecones' rings have tight and solid structure full of resin. Moreover, bristlecone stands are safe from fire because of little 38_____ plants spread in this place. The summits of Owens Valley is higher than they emerge if you observe from a 39_____.

H	**B**	**C**	**A**	**D**
A	**C**	**energy**	**stratification**	**bark**
air	**ground cover**	**distance**		

Travel Accounts

A There are many reasons why individuals have traveled beyond their own societies. Some travelers may have simply desired to satisfy curiosities about the larger world. Until recent times,

however, business dealings, political administration, military campaigns, missionary efforts, and the quest for economic or educational opportunities were more common inducements for foreign travel than was mere curiosity.

B Records of foreign travel appeared soon after the invention of writing, and fragmentary travel accounts appeared in both Mesopotamia and Egypt in ancient times. After the formation of large，imperial states in the classical world, travel accounts emerged as a prominent literary genre in many lands, and they held especially strong appeal for rulers desiring useful knowledge about their realms. The Greek historian Herodotus reported on his travels in Egypt and Anatolia in researching the history of the Persian wars. The Chinese envoy Zhang Qian described much of central Asia as far west as Bactria (modem-day Afghanistan) on the basis of travels undertaken in the first century BC while searching for allies for the Han dynasty. Hellenistic and Roman geographers such as Ptolemy, Strabo, and Pliny the Elder relied on their own travels through much of the Mediterranean world as well as reports of other travelers to compile vast compendia of geographical knowledge.

C During the postclassical era (about 500 AD to 1,500 AD), trade and pilgrimage emerged as major incentives for travel to foreign lands. Muslim merchants sought trading opportunities throughout much of the eastern hemisphere. They described lands， peoples， and commercial products of the Indian Ocean basin from east Africa to Indonesia， and they supplied the first written accounts of societies in sub. Saharan west Africa. While merchants set out in search of trade and profit, devout Muslims traveled as pilgrims to Mecca to make their hajj and visit the holy sites of Islam. Since the prophet Muhammad’s original pilgrimage to Mecca，untold millions of Muslims have followed his example, and thousands of accounts have related their experiences. East Asian travelers were not quite so prominent as Muslims during the postclassical era, but they too followed many of the highways and sea lanes of the eastern hemisphere. Chinese merchants frequently visited southeast Asia and India, occasionally venturing even to east Africa, and devout East Asian Buddhists undertook distant pilgrimages. Between the 5th and 9th centuries AD, hundreds and possibly even thousands of Chinese Buddhists traveled to India to study with Buddhist teachers, collect sacred texts, and visit holy sites. Written accounts recorded the experiences of many pilgrims, such as Faxian, Xuanzang, and Yijing. Though not so numerous as the Chinese pilgrims, Buddhists from Japan, Korea, and other lands also ventured abroad in the interests of spiritual enlightenment.

D Medieval Europeans did not hit the roads in such large numbers as their Muslim and east Asian counterparts during the early part of the postclassical era, although gradually increasing crowds of Christian pilgrims flowed to Jerusalem, Rome, Santiago de Compostela (in northern Spain)，and other sites. After the 12th century however, merchant, pilgrims, and missionaries from medieval Europe traveled widely and left numerous travel accounts, of which Marco Polo’s description of his travels and sojourn in China is the best known． As they became familiar with the larger world of the eastern hemisphere-and the profitable commercial opportunities that it offered-European peoples worked to find new and more direct routes to Asian and African markets. Their efforts took them not only to all parts of the eastern hemisphere, but eventually to the Americas and Oceania as well.

E If Muslim and Chinese peoples dominated travel and travel writing in postclassical times, European explorers, conquerors, merchants, and missionaries took center stage during the early modem era (about 1,500 AD to 1,800 AD). By no means did Muslim and Chinese travel come to a halt in early modem times. But European peoples ventured to the distant corners of the globe, and European printing presses churned out thousands of travel accounts that described foreign lands and peoples for a reading public with an apparently insatiable appetite for news about the larger world. The volume of travel literature was so great that several editors, including Giambattista Ramusio, Richard Hakluyt, Theodore de Bry, and Samuel Purchas., assembled numerous travel accounts and made them available in enormous published collections. While the travelers' accounts give much valuable information on these foreign lands and provide a window for the understanding of the local cultures and histories, they are also a mirror to the travelers themselves, for these accounts help them to have a better understanding of themselves. (This test is offered by IELTS break up master, www.ysfsds.com)

F During the 19th century, European travelers made their way to the interior regions of Africa and, the Americas, generating a fresh round of travel writing as they did so. Meanwhile, European colonial administrators devoted numerous writings to the societies of their colonial subjects, particularly in Asian and African colonies they established. By midcentury, attention was flowing also in the other direction. Painfully aware of the military and technological prowess of European and Euro-American societies, Asian travelers in particular visited Europe and the United States in hopes of discovering principles useful for the reorganization of their own societies. Among the most prominent of these travelers who made extensive use of their overseas observations and experiences in their own writings were the Japanese reformer Fukuzawa Yukichi and the Chinese revolutionary Sun Yat-sen.

G With the development of inexpensive and reliable means of mass transport, the 20th century witnessed explosions both in the frequency of long-distance travel and in the volume of travel writing. While a great deal of travel took place for reasons of business, administration, diplomacy, pilgrimage, and missionary work，as in ages past，increasingly effective modes of mass transport made it possible for new kinds of travel to flourish. The most distinctive of them was mass tourism, which emerged as a major form of consumption for individuals living in the world's wealthy societies. Tourism enabled consumers to get away from home to see the sights in Rome，take a cruise through the Caribbean, walk the Great Wall of China, visit some wineries in Bordeaux, or go on safari in Kenya. A peculiar variant of the travel account arose to meet the needs of these tourists: the guidebook, which offered advice on food, lodging, shopping, local customs, and all the sights that visitors should not miss seeing. Except for that, during the unprecedented waves of migration, numerous migrants have sought to record their experiences and articulate their feelings about life in foreign lands; being a hot topic in the nearest few decades, many intellectuals and writers, who have visited the homes of their ancestors and studied the inheritance their forebears' values and cultural traditions, write accounts about the ethnic consciousness. (This test is offered by IELTS break up master, www.ysfsds.com)

Questions 14-21

Complete the table below.Write ***NO MORE THAN TWO WORDS*** *from Reading Passage 3for each answer.*

TRAVELER	TIME	DESTINATION	PURPOSE
Herodotus	Classical ear Classical period	Egypt and Anatolia	To collect past records of 14_____
Zhang Qian	1st century BC	Central Asia	To search for 15_____
Ptolemy, Strabo, Pliny the Elder	Roman Empire	Mediterranean	To gather 16_____
Muslims	Post-classical era	Eastern Hemisphere	For commerce and 17_____
Asian Buddhist	5th to 9th centuries AD	India	To learn from 18_____and for spiritual enlighttenment
The Europeans	Early modem era	Remote areas of the world	To fulfill people ’ s wish to know more about the outside
Colonial regulator	19th century	Asia , Africa	To publicize the 19_____ they conquered
Sun Yet-sen, Fukuzawa Yukich	By the mid-century of the 1800s	Europe and United States	To gain 20_____for the reformation of their own countries
People from 21_____ _countries	20th century	Mass tourism	For leisure and recreation

Questions 22-27

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

22 What was the purpose of people travel in ancient times?

A To compile travel accounts.

B T0 study colonized underdeveloped regions.

C To obtain better education opportunities.

D To have a better understanding of other people and places.

23 The travelers’ accounts are a mirror to themselves

A because they help them to be aware of local histories.

B because they reflect the writers’ own experience and social life.

C because travelers can achieve their own values and win recognition.

D because travelers can study local cultures.

24 Which group of people preferred to go on a trip for pilgrimage in the early part of the postclassical ear?

A Muslim and East Asian Buddhists

B Romans

C Africans

D Greeks.

25 From l500 AD to 1800 AD, large numbers of travel publications met with great favour because

A they completed the published collections.

B they prompted trips to the new world.

C readers' needs were satisfied.

D they encouraged the public's interaction.

26 What enables the prosperous development of mass tourism?

A The accumulated wealth.

B The publication of travel books.

C The advanced food conservation technology.

D The various means of affordable transportation.

27 The main theme of this article is

A the historical meaning of travel books.

B the literary value of travel accounts.

C the publication procedure of travel accounts.

D the development of travel books.

Persian wars	**allies**	**geographical knowledge**	**pilgrimage**	**Buddhist teachers**
colonies	**principles**	**wealthy**	**D**	**B**
A	**C**	**D**	**D**	

READING PASSAGE 3

You should spend about 20 minutes on Questions 28-40, which are based on Reading Passage 3 below.

Questions 28-34

*The reading passage has seven paragraphs, **A**-**G***

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

List of Headings

i Financial hardship of community

ii A large money put on the urban renewal

iii Details of the community's makeover

iv Architecture suits families of various ethnic origins

v Problems happened later in Talbot Park

vi Introduction of Talbot Park

vii Ways of developing a harmony community

viii Good relationship between original neighborhoods

ix Talbot Park takes on a new look
x Make the community feel safe

28 paragraph **A**
29 paragraph **B**
30 paragraph **C**
31 paragraph **D**
32 paragraph **E**
33 paragraph **F**
34 paragraph **G**

State houses become stately homes

A An architecture of disguise is almost complete at Talbot Park in the heart of Auckland's Glen Innes. The place was once described as a state housing ghetto, rife with crime, vandalism and other social problems.But today after a $48 million urban renewal makeover, the site is home to 700 residents - 200 more than before - and has people regularly inquiring whether they can buy or rent there."It doesn't look like social housing," Housing New Zealand housing services manager Dene Busby says of the tidy brick and weatherboard apartments and townhouses which would look just as much at home in "There is no reason why public housing should look cheap in my view," says Design Group architect Neil of the eight three-bedroom terrace houses his firm designed.

B Talbot Park is a triangle of government-owned land bounded by Apirana Ave, Pilkington Rd and Point England Rd. In the early 1960s it was developed for state housing built around a linear park that ran through the middle.Initially, there was a strong sense of a family-friendly community. Former residents recall how the Talbot Park reserve played a big part in their childhoods - a place where the kids in the block came together to play softball, cricket, tiggy, leapfrog and bullrush.Sometimes they'd play "Maoris against Pakehas" but without any animosity. "It was all just good fun", says Georgie Thompson in Ben Schrader's We Call it Home: A History of State Housing in New Zealand. "We had respect for our neighbours and addressed them by title - Mr and Mrs so-and-so," she recalls.

C Quite what went wrong with Talbot Park is not clear. We Call it Home records that the community began to change in the late 1970s as more Pacific Islanders and Europeans moved in. The new arrivals didn't readily integrate with the community, a "them and us" mentality developed, and residents interacted with their neighbours less.What was clear was the buildings were deteriorating and becoming dilapidated, petty crime was on the rise and the reserve-focus of fond childhood memories-had become a wasteland and was considered unsafe.

D But it wasn't until 2002 that Housing New Zealand decided the properties needed upgrading.The master renewal plan didn't take advantage of the maximum accommodation density allowable (one unit per 100 sq m) but did increase density to one unit per 180 sq m by refurbishing all 108 star flat units, removing the multis and building 111 new home.The Talbot

strategy can be summed up as mix, match and manage. Mix up the housing with variety plans from a mix of architects, match house styles to what's built by the private sector, match tenants to the mix, and manage their occupancy.Inevitably cost comes into the equation. "If you're going to build low cost homes, you've got to keep them simple and you can't afford a fancy bit on them." says Michael Thompson of Architectus which designed the innovative three-level Atrium apartments lining two sides of a covered courtyard. At $300,000 per two bedroom unit, the building is more expensive but provides for independent disabled accommodation as well as offering solar hot water heating and rainwater collection for toilet cisterns and outside taps.

E The renewal project cost at $1.5 million which will provide park pathways, planting, playgrounds, drinking fountains, seating, skateboard rails, a half-size basketball hard court, and a pavilion. But if there was any doubt this is a low socio-economic area, the demographics for the surrounding Tamaki area are sobering. Of the 5000 households there, 55 per cent are state houses, 28 per cent privately owned (compared to about 65 per cent nationally) and 17 per cent are private rental. The area has a high concentration of households with incomes in the $5000 to $15,000 range and very few with an income over $70,000. That's in sharp contrast to the more affluent suburbs like Kohimarama and St John's that surround the area.

F "The design is for people with different culture background.” says architect James Lunday of Common Ground which designed the 21 large family homes. "Architecturally we decided to be relatively conservative-nice house in its own garden with a bit of space and good indoor outdoor flow." here’s a slight reflection of the whare and a Pacific fale, but not overplayed. “The private sector is way behind in urban design and sustainable futures,” says Bracey. “Redesigning streets and parks is a big deal and very difficult to do. The private sector won’t do it, because it’s so hard.” (This test is offered by IELTS break up master, www.ysfsds.com)

G There's no doubt good urban design and good architecture play a significant part in the scheme. But probably more important is a new standard of social control. Housing New Zealand calls it "intensive tenancy management." Others view it as social engineering."It's a model that we are looking at going forward," according to Housing New Zealand's central Auckland regional manager Graham Bodman ."The focus is on frequent inspections, helping tenants to get to know each other and trying to create an environment of respect for neighbours," says Bodman.That includes some strict rules - no loud parties after 10pm, no dogs, no cats in the apartments, no washing hung over balcony rails and a requirement to mow lawns and keep the property tidy.Housing New Zealand has also been active in organising morning teas and street barbecues for residents to meet their neighbours. "It's all based on the intensification," says Community Renewal project manager Stuart Bracey. "We acknowledge if you are going to put more people living closer together, you have to actually help them to live closer together because it creates tension---especially for people that aren't used to it."

Questions 35-37

*Use the information in the passage to match the people (listed **A**-**E**) with opinions or deeds below.*

35 variety buildings meet different needs.

36 centralized management and social control is important for tenants.

37 more community’ s activities help residents live closer.

A	Michael Thompson	**B**	Graham Bodman	**C**	Stuart Bracey
D	James Lunday	**E**	Dene Busby		

Questions 38-40

*Complete the following summary of the paragraphs of Reading Passage， using **NO MORE THAN TWO WORDS** from the Reading Passage 3 for each answer.*

The Talbot strategy took measures to raise housing **38**_____ instead of taking full use of the upper limit. Brought a range of designs from various **39**_____ together, made house styles go with the part designed by individuals, matched tenants from different culture. As for the cost, the simplicity and inexpensive need to be followed to byild a house within low **40**_____.

vi	**viii**	**v**	**ix**	**i**
iv	**vii**	**A**	**B**	**C**
density	**plans**	**fancy bit**		

Coastal Archaeology of Britain

This article introduces the concept of coastal archaeology as a growth field for maritime archaeology in terms of the data that can be gathered and also as a realm for the development of archaeological theory. Meanwhile, it illustrates the history and development of coastal archaeology and highlights coastal archaeology as a facet of maritime archaeology.

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 researches 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, have been a particular focus for concern. At the same time archaeologists were beginning to recognise 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 quite localized, 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 adaptation 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 reappeared, 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 artifacts produced by premodern societies, and further researches 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. 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 harbour 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 researches has been the extent of industrial activities 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 surveys 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 recognised for some time, especially in the Thames estuary and around the Solent and Poole Harbour, 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 15-17

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

15 What has caused public interest in coastal archaeology in recent years?

A The rising awareness of climate change.

B The rapid development of England’s coastal archaeology.

C The discovery of an underwater forest.

D The systematic research conducted on coastal archaeological findings.

16 What does the passage say about the evidence of boats?

A There’s enough knowledge of the boatbuilding technology of the prehistoric people.

B Many of the boats discovered were found in harbours.

C There is no transcript about the usages of boats for a century.

D The evidence of boats is not valuable and useful now.

17 What can be discovered by aerial photography?

A fisheries

B Roman towns

C harbours

D salt mines

Questions 18-24

Do the following statements agree with the information given in Reading Passage 2?

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

18 The shape of British land was decreased with the sea level rising after the glacial period.

19 The coastline of England has changed periodically.

20 The undersea environment is beneficial to preserve coastal archaeological evidence.

21 The design of boats used by premodern people was very simple.

22 The boats in Britain and other European countries was produced similarly.

23 Few of documentary evidence about mining industry are found.

24 Large passenger boats are causing increasing damage to the seashore.

Questions 25-27

*Choose **THREE** letters from A-G.*

Which THREE of the following statements are mentioned in the passage?

A How costal archaeology was initially found.

B It is hard to know the population of people living in the coastal areas.

C How much the prehistoric communities understood the climate change.

D Our knowledge of boat evidence is limited.

E Some fishing grounds were converted to ports.

F Human development threatens the archaeological remains.

G Coastal archaeology will become more important in the future

C	**D**	**A**	**TRUE**	**FALSE**
TRUE	**FALSE**	**NG**	**TRUE**	**TRUE**
A	**D**	**F**		

Bestcom-Considerate Computing

A “YOUR BATTERY IS NOW FULL CHARGED,” ANNOUNCED THE LAPTOP COMPUTER to its owner, Donald A. Norman, with enthusiasm-perhaps even a hint of pride-in its synthetic voice. To be sure, distractions and multitasking are hardly new to the human condition. “A complicated life, continually interrupted by competing requests for attention, is as old as procreation,” laughs Ted Selker of the Massachusetts Institute of Technology Media Lab. But increasingly, it is not just our kids pulling us three ways at once, it is also a relentless barrage of e-mail, alerts, alarms, calls, instant messages and automated notifications, none of them coordinated and all of them

oblivious to whether we are busy-or even present. “It’s ridiculous that my own computer can't figure out whether I’m in front of it, but a public toilet can,” exclaims Roel Vertegaal of Queen’s University in Ontario.

B Humanity has connected itself through roughly three billion networked telephones, computers, traffic lights-even refrigerators and picture frames-because these things make life more convenient and keep us available to those we care about. So although we could simply turn off the phones, close the e-mail program, and shut the office door when it is time for a meeting or a stretch of concentrated work, we usually don’t. We just endure the consequences.

C Numerous studies have shown that when people are unexpectedly interrupted, they not only work less efficiently but also make more mistakes. “It seems to add cumulatively to a feeling of frustration,” Picard reports, and that stress response makes it hard to regain focus. It isn't merely a matter of productivity and the pace of life. For pilots, drivers, soldiers and doctors, errors of inattention can be downright dangerous. “If we could just give our computers and phones some understanding of the limits of human attention and memory, it would make them seem a lot more thoughtful and courteous,” says Eric Horvitz of Microsoft Research. Horvitz, Vertegaal, Selker and Picard are among a small but growing number of researchers trying to teach computers, phones, cars and other gadgets to behave less like egocentric oafs and more like considerate colleagues.

D To do this, the machines need new skills of three kinds: sensing, reasoning and communicating. First a system must sense or infer where its owner is and what he or she is doing. Next it must weigh the value of the messages it wants to convey against the cost of the disruption. Then it has to choose the best mode and time to interject. Each of these pushes the limits of computer science and raises issues of privacy, complexity or reliability. Nevertheless, “attentive” computing systems have begun appearing in newer Volvos and IBM has introduced Websphere communications software with a basic busyness sense. Microsoft has been running extensive in-house tests of a much more sophisticated system since 2003. Within a few years, companies may be able to offer every office worker a software version of the personal receptionist that only corner-suite executives enjoy today. But if such an offer should land in your inbox, be sure to read the fine print before you sign. An attentive system, by definition, is one that is always watching. That considerate computer may come to know more about your work habits than you do.

E Most people aren’t as busy as they think they are, which is why we can usually tolerate interruptions from our inconsiderate electronic paraphernalia. James Fogarty and Scott E. Hudson of Carnegie Mellon University recently teamed up with Jennifer Lai of IBM Research to study 10 managers, researchers and interns at work. They videotaped the subjects and periodically had them rate their “interruptibility”. The amount of time the workers spent in leave-me-alone mode varied from person to person and day to day, ranging from 10 to 51 percent. On average, the subjects wanted to work without interruption about one third of the time. In studies of Microsoft employees, Horvitz has similarly found that they typically spend more than 65 percent of their day in a state of low attention.

F Today’s phones and computers, which naively assume that the user is never too busy to take a call, read an email, or click “OK” on an alert box, thus are probably correct about two thirds of time. To be useful, then, considerate systems will have to be more than 65 percent accurate in sensing when their users are near their cognitive limits. Bestcom/Enhanced Telephony, a Microsoft prototype based on Horvitz's work, digs a little deeper into each user’s computer to

find clues about what they are up to. Microsoft launched an internal beta test of the system in mid-2003. By last October, Horvitz says, about 3,800 people were using the system to field their incoming phone calls.

G Horvitz himself is one of those testers, and while we talk in his office in Redmond, Wash, Bestcom silently handles one call after another. First it checks whether the caller is listed in his address book, the company directory, or its log of people he has called recently. Triangulating these sources, it tries to deduce their relationship. Family members, supervisors and people he called earlier today ring through. Others see a message on their computer that he is in a meeting and won't be available until 3 P.M. The system scans Horvitz's and the caller's calendar and offers to reschedule the call at a time that is open for both. Some callers choose that option, others leave voice mail. E-mail messages get a similar screening. When Horvitz is out of the office, Bestcom automatically offers to forward selected callers to his cellphone-unless his calendar and other evidence suggest that he is in a meeting.

H Most large companies already use computerized phone systems and standard calendar and contact management software, so tapping into those "sensors" should be straightforward. Not all employees will like the idea of having a microphone on all the time in their office, however, nor will everyone want to expose their datebook to some program they do not ultimately control. Moreover, some managers might be tempted to equate a "state of low attention" with "goofing off" and punish those who seem insufficiently busy.

Questions 1-6

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

1 According to Ted Selker, human reproduction has been disturbed throughout history.

2 If people are interrupted by calls or e-mails they usually put up with it instead of feeling sickness.

3 Microsoft is now investigating a software which is compatible with ordinary office.

4 People usually have misperception about whether they are busy or not.

5 Experts in Carnegie Mellon University conducted a research observing all occupations of IBM.

6 Current phone and computer systems have shortcut keys for people receiving information immediately.

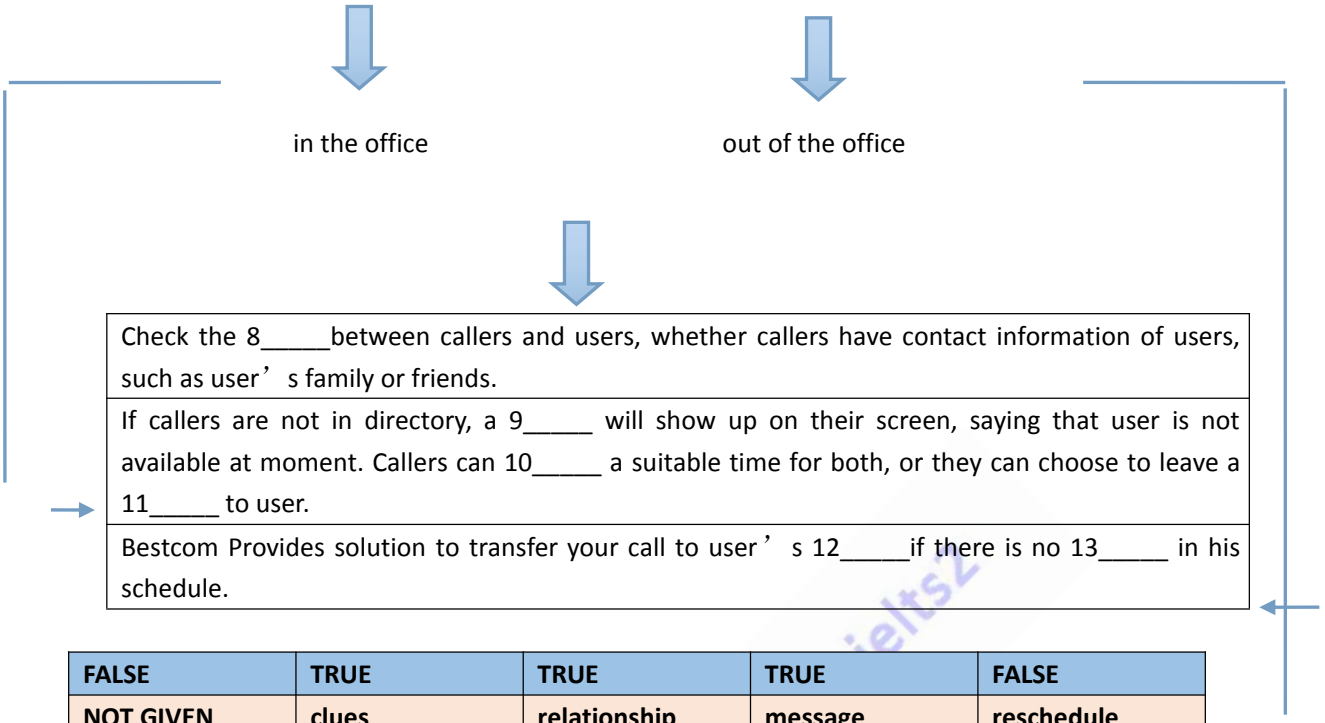
Questions 7-13

Answer the questions in the diagram below.

*Choose **ONLY ONE WORD** from the passage for each answer.*

Bestcom Working Process

Bestcom system made further efforts in order to find 7_____ about what are user doing



Check the 8_____between callers and users, whether callers have contact information of users, such as user’ s family or friends.
If callers are not in directory, a 9_____ will show up on their screen, saying that user is not available at moment. Callers can 10_____ a suitable time for both, or they can choose to leave a 11_____ to user.
Bestcom Provides solution to transfer your call to user’ s 12_____if there is no 13_____ in his schedule.

FALSE	**TRUE**	**TRUE**	**TRUE**	**FALSE**
NOT GIVEN	**clues**	**relationship**	**message**	**reschedule**
mail	**cellphone**	**meeting**		

Questions 28-34

Reading passage 3 has seven paragraphs, A-G.

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

List of Headings
i An initiative of CSR even without financial rewards
ii Tight combination of overall business strategy and CRS
iii Business expansion benefited from CSR
iv Lack of action by the state of social issues
v Drives or pressures to take CSR into practice
vi The consequence suffered by companies that failed to anticipate the social influence
vii Companies applying CSR should be selective
viii Mutually beneficial relationship between business and society

28 Paragraph A

29 Paragraph B

30 Paragraph C

31 Paragraph D

32 Paragraph E
33 Paragraph F
34 Paragraph G

Corporate Social Responsibility

The moral appeal---arguing that companies have a duty to be good citizens and to "do the right thing" ---is prominent in the goal of Business for Social Responsibility, the leading nonprofit CSR business association in the United States.

A An excellent definition was developed in the 1980s ''Meeting the needs of the present without compromising the ability of future generations to meet their own needs." The notion of license to operate derives from the fact that every company needs tacit or explicit permission from governments, communities, and numerous other stakeholders to do business. Finally, reputation is used by many companies to justify CSR initiatives on the grounds that they will improve a company's image, strengthen its brand，enliven morale, and even raise the Value of its stock.

B To advance CSR, we must root it in a broad understanding of the interrelationship between a corporation and society. To say broadly that business and society need each other might seem like a cliché, but it is also the basic truth that will pull companies out of the muddle that their current corporate-responsibility thinking has created. Successful corporations need a healthy society. Education, health care, and equal opportunity are essential to a productive workforce. Safe products and working conditions not only attract customers but lower the internal costs of accidents. Efficient utilization of land, water, energy, and other natural resources makes business more productive. Good government, the rule of Jaw, and property rights are essential for efficiency and innovation. Any business that pursues its ends at the expense of the society in which it operates will find its success to be illusory and ultimately temporary. At the same time, a health society needs successful companies. No social program can rival the business sector when it comes to creating the jobs, wealth, and innovation that improve standards of living and social conditions over time.

C A company's impact on society also changes over time, as social standards evolve and science progresses. Asbestos, now understood as a serious health risk, was thought to be safe in the early 1900s, given the scientific knowledge then available. Evidence of its risks gradually mounted for more than 50 years before any company was held liable for the harms it can cause. Many firms that failed to anticipate the consequences of this evolving body of research have been bankrupt by the results. No longer can companies be content to monitor only the obvious social impacts of today. Without a careful process for identifying evolving social effects of tomorrow, firms may risk their very survival.

D No business can solve all of society's problems or bear the cost of doing so. Instead, each company must select issues that intersect with its particular business. Corporations are not responsible for all the world's problems, nor do they have the resources to solve them all. Each company can identify the particular set of societal problems that it is best equipped to help resolve and from which it can gain the greatest competitive benefit. Addressing social issues by creating shared value will lead to self-sustaining solutions that do not depend on private or government subsidies. When a well-run business applies its vast resources, expertise, and management talent to problems that it understands and in which it has a stake, it can have a

greater impact on social good than any other institution or philanthropic organization.

E The best corporate citizenship initiatives involve far more than writing a check: they specify clear, measurable goals and track results over time. A good example is GE’s program to adopt underperforming public high schools near several of its major U.S. Facilities. The company contributes between $250, 000 and $1 million over a five-year period to each school and makes in-kind donations as well GE managers and employees take an active role by working with school administrators to assess needs and mentor or tutor students. The graduation rate of these schools almost doubled during this time period. Effective corporate citizenship initiatives such as this one create goodwill and improve relations with local governments and other important constituencies. What’s more, GE’s employees feel great pride in their participation. Their effect is inherently limited though. No matter how beneficial the program is, it remains incidental to the company's business, and the direct effect on GE’s recruiting and retention is modest.

F Microsoft is a good example of a shared-value opportunity arising from investments in context. The shortage of information technology workers is a significant constraint on Microsoft’s growth, currently, there are more than 450,000 unfilled IT positions in the United States alone. Community colleges, representing 45% of all U.S． Undergraduates, could be a major solution. Microsoft recognizes, however, that community colleges face special challenges: IT curricula are not standardized, technology used in classrooms is often outdated, and there are no systematic professional development programs to keep faculty up to date. In addition to contributing money and products, Microsoft sent employee volunteers to colleges to assess needs, contribute to curriculum development, and create faculty development institutes. Note that in this case, volunteers and assigned staff were able to use their core professional skills to address a social need, a far cry from typical volunteer programs. Microsoft has achieved results that have benefited many communities while having a direct-and potentially significant-impact on the company.

G At the heart of any strategy is a unique value proposition: a set of needs a company can meet for its chosen customers that others cannot. The most strategic CSR occurs when a company adds a social dimension to its value proposition, making social impact integral to the overall strategy Consider Whole Foods Market, whose value proposition is to sell organic, natural, and healthy food products to customers who are passionate about food and the environment. Whole Foods’ commitment to natural and environmentally friendly operating practices extends well beyond sourcing. Stores are constructed using a minimum of virgin raw materials. Recently, the company purchased renewable wind energy credits equal to 100% of its electricity use in all of its stores and facilities, the only Fortune 500 Company to offset its electricity consumption entirely. Spoiled produce and biodegradable waste are trucked to regional centers for composting. Whole Foods’ vehicles are being converted to run on biofuels. Even the cleaning products used in its stores are environmentally friendly. And through its philanthropy, the company has created the Animal Compassion Foundation to develop more natural and humane ways of raising farm animals. In short, nearly every aspect of the company’s value chain reinforces the social dimensions of its value proposition, distinguishing Whole Foods from its competitors.

Questions 35-36

Complete the following summary of the paragraphs of Reading Passage 3, using ***NO MORE THAN TWO WORDS*** *from the Reading Passage 3* for *each answer.*

The Implement of CSR, HOW?

Promotion of CSR requires the understanding of interdependence between business and society. **35**_____health care and education play significant roles in work efficiency. Restrictions imposed by government and companies both protect consumers from being treated unfairly. Enhancement of security situation can cut down the **36**_____of accidents in the workplace. Similarly society becomes a pool of more human needs and aspirations.

Questions 37-40

Use the information in the passage to match the companies(listed A-C) with opinions or deeds below.

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

A General Electronics	**B** Microsoft	**C** Whole foods market

37 The disposable waste

38 The way company purchases as goods

39 Subsidizing the under-developing country

40 Ensuring the access to updated information

v	**viii**	**iv**	**vii**	**i**
iii	**ii**	**equal opportunity**	**internal cost**	**C**
C	**A**	**B**		

Traditional Farming Practice in Tanzania

A By tradition land in Luapula is not owned by individuals, but as in many other parts of Africa is allocated by the headman or headwoman of a village to people of either sex, according to need. Since land is generally prepared by hand, one person cannot take on a very large area; in this sense land has not been a limiting resource over large parts of the province. The situation has already changed near the main townships, and there has long been a scarcity of land for cultivation in the Valley. In these areas registered ownership patterns are becoming prevalent.

B Most of the traditional cropping in Luapula, as in the Bemba area to the east, is based on citemene, a system whereby crops are grown on the ashes of tree branches. As a rule, entire trees are not felled, but are pollarded so that they can regenerate. Branches are cut over an area of varying size early in the dry season, and stacked to dry over a rough circle about a fifth to a tenth of the pollarded area. The wood is fired before the rains and in the first year planted with the African cereal finger millet(Eleusine coracana). The grain of this crop is used to brew local beers such as cipumu, which contribute several vitamins of the B complex to people’s diet. Cipumu is also used in cementing reciprocal working relationships.

C Du ring the second season, and possibly for a few seasons more the area is planted to variously mixed combinations of annuals such as maize, pumpkins (Telfiria occidentalis) and other cucurbits, sweet potatoes, groundnuts, Phaseolus beans and various leafy vegetables, grown with a certain amount of rotation. The diverse sequence ends with cassava, which is often planted into the developing last-but-one crop as a relay.

D Richards observed that the practice of citemene entails a definite division of labour between men and women. A man stakes out a plot in an unobtrusive manner, since it is considered provocative towards one's neighbours to mark boundaries in an explicit way. The dangerous work

of felling branches is the men’s province, and involves much pride. Branches are stacked by the women, and fired by the men. Formerly women and men cooperated in the planting work, but the harvesting was always done by the women. At the beginning of the cycle little weeding is necessary, since the firing of the branches effectively destroys weeds. As the cycle progresses weeds increase and nutrients eventually become depleted to a point where further effort with annual crops is judged to be not worthwhile: at this point the cassava is planted, since it can produce a crop on nearly exhausted soil. Thereafter the plot is abandoned, and a new area pollarded for the next citemene cycle.

E When forest is not available---this is increasingly the case nowadays, various ridging systems are built on small areas, to be planted with combinations of maize, beans, groundnuts and sweet potatoes, usually relayed with cassava. These plots are usually tended by women, and provide subsistence. Where their roots have year-round access to water tables mango, guava and oil-palm trees often grow around houses, particularly in the Valley, forming a traditional agroforestry system. In season some of the fruit is sold by the roadside or in local markets.

F Fishing has long provided a much needed protein supplement to the diet of Luapulans, as well as being the one substantial source of cash. Much fish is dried for sale to areas away from the main waterways. The Mweru and Bangweulu Lake Basins are the main areas of year-round fishing, but the Luapula River is also exploited during the latter part of the dry season. Several previously abundant and desirable species, such as the Luapula salmon or mpumbu (Labeo altivelis) and pale (Sarotherodon machochir) have all but disappeared from Lake Mweru, apparently due to mismanagement.

G Only small numbers of cattle or oxen are kept in the province owing to the prevalence of the tse-tse fly. For the few herds, the dambos provide subsistence grazing during the dry season. The absence of animal draft power greatly limits people’s ability to plough and cultivate land: a married couple can rarely manage to prepare by hand-hoeing more than two limas. Most people keep freely roaming chickens and goats. These act as a reserve for bartering, but may also be occasionally slaughtered for ceremonies or for entertaining important visitors. These animals are not a regular part of most people’s diet.

H Citemene has been an ingenious system for providing people with seasonal production of high quality cereals and vegetables in regions of acid, heavily leached soils. Nutritionally, the most serious deficiency was that of protein. This could at times be alleviated when fish was available, provided that cultivators lived near the Valley and could find the means of bartering for dried fish. The citemene/flshing system was well adapted to the ecology of the miombo regions and sustainable for long periods, but only as long as human population densities stayed at low levels.

I Overall, people must learn to intensify and diversify their productive systems while yet ensuring that these systems will remain productive in the future, when even more people will need food. Increasing overall production of food, though a vast challenge in itself, will not be enough, however. At the same time storage and distribution systems must allow everyone access to at least a moderate share of the total.

Questions 1-5

Complete the notes below.

*Choose **NO MORE THAN TWO WORDS** from Reading Passage 1 for each answer.*

1 In Luapula land allocation is on the basis of _____.

2 Citemene system provides land with _____ of branches where crops are planted.

3 The last planted crop is _____ during the second season.

4 Farm work was finished by _____ in harvest time by citemene system.

5 Under suitable conditions，fruit trees are planted near _____.

Questions 6-9

Look at the following descriptions (Question 6-9) and the list of animals below.

Match each description with the correct animal A---C

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

A Fish
B Oxen
C Goats

6 were used in some special occasions such as celebrations.

7 cannot thrive as being harassed by the pests.

8 were a main part of making profit.

9 were sold to other places.

Questions 10-12

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

YES	*if the statement agrees with the information*
NO	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

10 Farmers rarely use animals to cultivate land.

11 Local people eat goats on a regular time.

12 Children are taken as a labor force when it is busy time.

Question 13

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

13 What is author’ s opinion towards the practice of citemene?

A It could be modified in the future without any effort.

B It is the most efficient Way for local farmers.

C It provides inadequate support to the population.

D It supplies sufficient nutrition to local people.

need	ashes	cassava	women	houses
C	B	A	A	YES
NO	NOT GIVEN	C		

The Lost City

Thanks to modern remote-sensing techniques, a ruined city in Turkey is slowly revealing itself as one of the greatest and most mysterious cities of the ancient world. Sally Palmer uncovers more.

A The low granite mountain, known as Kerkenes Dag, juts from the northern edge of the Cappadocian plain in Turkev. Sprawled over the mountainside are the ruins of an enormous city, contained by crumbling defensive walls seven kilometers long. Many respected archaeologists believe these are the remains of the fabled city of Pteria, the sixth-century BC stronghold of the Medes that the Greek historian Herodotus described in his famous work The HiStories. The short-lived city came under Median control and only fifty years later was sacked, burned and its strong stone walls destroyed. (This test is offered by IELTS break up master, www.ysfsds.com)

B British archaeologist Dr Geoffrey Summers has spent ten years studying the site. Excavating the ruins is a challenge because of the vast area they cover. The 7 km perimeter walls run around a site covering 271 hectares. Dr Summers quickly realised it would take far too long to excavate the site using traditional techniques alone. So he decided to use modern technology as well to map the entire site, both above and beneath the surface, to locate the most interesting areas and priorities to start digging.

C In 1993, Dr Summers hired a special hand-held balloon with a remote-controlled cameta attached. He walked over the entire site holding the balloon and taking photos. Then one afternoon, he rented a hot-air balloon and floated over the site, taking yet more pictures. By the end of the 1994 season, Dr Summers and his team had a jigsaw of aerial photographs of the whole site. The next stage was to use remote sensing, which would let them work out what lay below the intriguing outlines and ruined walls. “Arehaeology is a discipline that lends itself very well to remote sensing because it revolves around space,” says Scott Branting, an associated director of the project. He started working with Dr Summers in 1995.

D The project used two main remote-sensing techniques. The first is magnetometry, which works on the principle that magnetic fields at the surface of the Earth are influenced by what is buried beneath. It measures localised variations in the direction and intensity of this magnetic field. “The Earth’s magnetic field can vary from place to place, depending on what happened there in the past,” says Branting. “If something containing iron oxide was heavily burnt, by natural or human actions, the iron particles in it can be permanently reoriented, like a compass needle, to align with the Earth’s magnetic field present at that point in time and space.” The magnetometer detects differences in the orientations and intensities of these iron particles from the present-day magnetic field and uses them to produce an image of what lies below ground.

E Kerkenes Dag lends itself particularly well to magnetometry because it was all burnt once in a savage fire. In places the heat was sufficient to turn sandstone to glass and to melt granite. The fire was so hot that there were strong magnetic signatures set to the Earth’s magnetic field from the time—around 547 BC—resulting in extremely clear pictures. Furthermore, the city was never rebuilt. “If you have multiple layers, it can confuse pictures, because you have different walls from different periods giving signatt that all in different directions,” says Branting. “We only have one going down from about 1.5 meters, so we can get a good picture of this fairly short-lived city.”

F The other main sub-surface mapping technique, which is still being used at the site, is resistivity. This technique measures the way electrical pulses are conducted through sub-surface soil. It’s

done by shooting pulses into the ground through a thin metal probe. Different materials have different electrical conductivity. For example, stone and mud brick are poor conductors, but looser, damp soil conducts very well. By walking around the site and taking about four readings per metre, it is possible to get detailed idea hyum, of what is where beneath the surface. The teams then build up pictures of walls, hearths and other remains. "It helps a lot if it has rained, because the electrical pulse can get through more easily," says Branting. "Then if something is more resistant, it really shows up." This is one of the reasons that the project has a spring season, when most of the resistivity work is done. Unfortunately, testing resistivity is a lot slower than magnetometry. "If we did resistivity over the whole site it would take about 100 years," says Branting. Consequently, the team is concentrating on areas where they want to clarify pictures from the magnetometry.

G Remote sensing does not reveal everything about Kerkenes Dag, but it shows the most interesting sub-surface areas of the site. The archaeologists can then excavate these using traditional teehniques. One surprise came when they dug out one of the fates in the defensive walls. "Our observations in early seasons led us to assume that we were looking at a stone base from a mudbrick city wall, such as would be found at most other cities in the Ancient Near East," says Dr Summers. "When we started to excavate we were staggered to discover that the walls were made entirely from stone and that the gate would have stood at least ten metres high. After ten years of study, Pteria is gradually giving up its secrets."

Questions 28-31

Reading Passage 3 has seven paragraphs, A-G

Which paragraph contains the following information?

28 The reason for the deployment of a variety of investigative methods

29 An example of an unexpected find

30 How the surface of the site was surveyed from above

31 The reason why experts are interested in the site

Questions 32-39

Complete the summary below.

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

Exploring the ancient city of Pteria

Archaeologists began working ten years ago. They started by taking photographs of the site from the ground and then from a distance in a 32_____. They focused on what lay below the surface using a magnetometer, which identifies variations in the magnetic field. These variations occur when the 33_____ in buried structures have changed direction as a result of great heat. They line

up with the surrounding magnetic field iust as a 34_____ would do.

The other remote-sensing technique employed was resistivity. This uses a 35_____ to fire electrical pulses into the earth. The principle is that building materials like 36_____ and stone do not conduct electricity well, while 37_____ does this much more effectively. This technique is mainly employed during the 38_____, when conditions are more tavourable. Resistivity is mainly being used to 39_____ some images generated by the magnetometer.

Question 40

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

How do modem remote-sensing techniques help at the Pteria site?

A They detect minute buried objects for the archaeologists to dig up.

B They pinpoint key areas which would be worth investigating closely.

C They remove the need for archaeologists to excavate any part of the site.

D They extend the research period as they can be used at any time of year.

B	**G**	**C**	**A**	**hot-air balloon**
iron particles	**compass or compass needle**	**thin metal probe**	**mudbrick**	**looser damp soil**
spring	**clarify**	**B**		

Biology of Bitterness

A There is a reason why grapefruit juice is served in little glasses: Most people don’ t want to drink more than a few ounces at a time. Naringi, a natural chemical compound found in grapefruit, tastes bitter. Some people like that bitterness in small doses and believe it enhances the general flavor, but others would rather avoid it altogether. So juice packagers often select grapefruit with low naringin content, even though the compound has antioxidant properties that some nutritionists contend may help prevent cancer and arteriosclerosis.

B It is possible, however, to get the goodness of grapefruit juice without the bitter taste. I found that out by participating in a test conducted at the Linguagen Corporation, a biotechnology company in Cranbury, New Jersey. Sets of two miniature white paper cups, labeled 304 and 305, were placed before five people seated around a conference table. Each of us drank from one cup and then the other, cleansing our palates between tastes with water and a soda cracker. Even the smallest sip of 304 had grapefruit’ s unmistakable bitter bite. But 305 was smoother; there was the sour taste of citrus but none of the bitterness of naringin. This juice had been treated with adenosine monophosphate, or AMP, a compound that blocks the bitterness in foods without

making them less nutritious.

C There are thousands of bitter-tasting compounds in nature. They defend plants by warning animals away and protect animals by letting them know when a plant may be poisonous. But the system isn't foolproof. Grapefruit and cruciferous vegetables like brussels sprouts and kale are nutritious despite—and sometimes because of—their bitter-tasting components. Over time, many people have learned to love them, at least in small doses. "Humans are the only species that enjoys bitter taste," says Charles Zuker, a neuroscientist at the University of California School of Medicine at San Diego. "Every other species is averse to bitter because it means bad news. But we have learned to enjoy it. We drink coffee, which is bitter, and quinine (in tonic water) too. We enjoy having that spice in our lives."

D People have varying capacities for tasting bitterness, and the differences appear to be genetic. About 75 percent of people are sensitive to the taste of the bitter compounds phenylthiocarbamide and 6-n-propylthiouracil, and 25 percent are insensitive. Those who are sensitive to Phenylthiocarbamide seem to be less likely than others to eat cruciferous vegetables, according to Stephen Wooding, a geneticist at the University of Utah. Some people, known as supertasters, are especially sensitive to 6-n-propylthiouracil because they have an unusually high number of taste buds. Supertasters tend to shun all kinds of bitter-tasting things, including vegetables, coffee, and dark chocolate. Perhaps as a result, they tend to be thin. They're also less fond of alcoholic drinks, which are often slightly bitter. Dewar's scotch, for instance, tastes somewhat sweet to most people. "But a supertaster tastes no sweetness at all，only bitterness," says Valerie Dully, an associate professor of dietetics at the University of Connecticut at Storrs.

E In one recent study, Dully found that supertasters consume alcoholic beverages, on average, only two to three times a week, compared with five or six times for the average nontasters. Each taste bud, which looks like an onion, consists of 50 to 100 elongated cells running from the top of the bud to the bottom. At the top is a little clump of receptors that capture the taste molecules, known as tastants, in food and drink. The receptors function much like those for sight and smell. Once a bitter signal has been received, it is relayed via proteins known as G proteins. The G protein involved in the perception of bitterness, sweetness, and umami was identified in the early 1990s by Linguagen's founder, Robert Margolskeem at Mount Sinai School of Medicine in NewYork City. Known as gustducin, the protein triggers a cascade of chemical reactions that lead to changes in ion concentrations within the cell. Ultimately, this delivers a signal to the brain that registers as bitter. "The signaling system is like a bucket brigade," Margolskee says. "It goes from the G protein to other proteins."

F Once they figured out the taste mechanism, scientists began to think of ways to interfere with it. They tried AMP, an organic compound found in breast milk and other substances, which is created as cells break down food. AHP has no bitterness of its own, but when put in foods, Margolskee and his colleagues discovered, it attaches to bitter-taste receptors. As effective as it is, AMP may not be able to dampen every type of bitter taste, because it probably doesn't attach to all 30 bitter-taste receptors. So Linguagen has scaled up the hunt for other bitter blockers with a technology called high-throughput screening. Researchers start by coaxing cells in culture to

activate bitter-taste receptors. Then candidate substances, culled from chemical compound libraries, are dropped onto the receptors, and scientists look for evidence of a reaction. (This test is offered by IELTS break up master, www.ysfsds.com)

G In time, some taste researchers believe, compounds like AMP will help make processed foods less unhealthy. Consider, for example, that a single cup of Campbell’ s chicken noodle soup contains 850 milligrams of sodium chloride, or table salt — more than a third of the recommended daily allowance. The salt masks the bitterness created by the high temperatures used in the canning process, which cause sugars and amino acids to react. Part of the salt could be replaced by another salt, potassium chloride, which tends to be scarce in some people’s diets. Potassium chloride has a bitter aftertaste, but that could be eliminated with a dose of AMP.

H A number of foodmakers have already begun to experiment with AMP in their products, and other bitter blockers are being developed by rival firms such as Senomyx in La Jolla, California. In a few years, perhaps, after food companies have taken the bitterness from canned soup and TV dinners, they can set their sights on something more useful: a bitter blocker in a bottle that any of us can sprinkle on our brussels sprouts or stir into our grapefruit juice.

Questions 1-8

Reading Passage 1 has eight paragraphs A—H.

Which paragraph contains the following information?

1 Experiment on bitterness conducted

2 Look into the future application

3 Bitterness means different information for human and animals

4 Spread process of bitterness inside of body

5 How AMP blocks bitterness

6 Bitterness lowers unhealthy impact

7 Bitterness introduced from a fruit

8 Genetic feature determines sensitivity

Questions 9-12

Complete the following summary of the paragraphs of Reading Passage 1, using ***NO MORE THAN TWO WORDS*** *for each answer*.

The reason why grapefruit tastes bitter is because a substance called 9_____ contained in it. However, bitterness plays a significant role for plants. It gives a signal that certain plant is 10_____. For human beings, different person carries various genetic ability of tasting bitterness. According to a scientist at the University of Utah, 11_____ have exceptional plenty of 12_____,which allows them more easily to perceive bitter compounds.

Questions 13-14

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

13 What is the main feature of AMP according to this passage?

A Offsets bitter flavor in food

B Only exists in 304 cup

C Tastes like citrus

D Chemical reaction when meets biscuit

14 What is the main function of G protein?

A Collecting taste molecules

B Identifying different flavors

C Resolving large molecules

D Transmitting bitter signals

B	**H**	**C**	**E**	**F**
G	**A**	**D**	**naringi**	**poisonous**
supertasters	**taste buds**	**A**	**D**	

READING PASSAGE 1

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

Pesticide in an India Village

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, 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. (This test is offered by IELTS break up master, www.ysfsds.com)

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 forSustainable 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, which is common throughout much of India. Neem trees protect themselves against insects 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 pesticide, 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?

TRUE	*If the statement agrees with the information*
FALSE	*If the statement contradicts the information*
NOT GIVEN	*If there is no information on this*

1 Cotton was a favorable crop in Andhra Pradesh state because it could bring lots of benefits to the local farmers.

2 The majority of farmers had used the agricultural pesticides for many years.

3 The yield of cotton is relatively lower than that of other agricultural crops.

4 The farmers didn't realize the speed of the pests evolution was so fast.

Questions 5-10

Complete the summary below.

*Choose **NO MORE THAN TWO WORDS** from the passage 1 for each answer.*

The process of protecting crops from insects

Firstly, neem seeds need to be crushed into 5 _____ form, which is left behind 6 _____ in water. Then we need to spray the solution onto the crop. 7 _____ is applied to mix with soil in order to eliminate bugs and bacteria， and its usage 8 _____ when the level of nitrogen in an 9 _____ goes up. The only expense for this preparation period goes to the 10 _____ because neem trees come from native sources.

Questions11-13

Answer the questions below.

*Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage 1 for each answer.*

11 In which year did all the farmers use NPM for their crops in Punukula?
12 What gave the women of Punukula a business opportunity to NPMs?
13 Name one project that the citizens of Punukula decide to develop in the NPM.

TRUE	**FALSE**	**NOT GIVEN**	**FALSE**	**powder**
overnight	**Neemcake**	**doubles**	**organic fertiliser**	**labor**
by 2000	**neem seeds**	**water purification**		

Antarctica-in from the Cold

A A little over a century ago, men of the ilk of Scott, Shackleton and Mawson battled against Antarctica's blizzards, cold and deprivation. In the name of Empire and in an age of heroic deeds they created an image of Antarctica that was to last well into the 20th century-an image of remoteness, hardship, bleakness and isolation that was the province of only the most courageous of men. The image was one of a place removed from everyday reality, of a place with no apparent value to anyone.

B As we enter the 21st century, our perception of Antarctica has changed. Although physically Antarctica is no closer and probably no warmer, and to spend time there still demands a dedication not seen in ordinary life, the continent and its surrounding ocean are increasingly seen to an integral part of Planet Earth, and a key component in the Earth System. Is this because the world seems a little smaller these days, shrunk by TV and tourism, or is it because Antarctica really does occupy a central spot on Earth's mantle? Scientific research during the past half century has revealed — and continues to reveal — that Antarctica's great mass and low temperature exert a major influence on climate and ocean circulation, factors which influence the lives of millions of people all over the globe.

C Antarctica was not always cold. The slow break-up of the super-continent Gondwana with the northward movements of Africa, South America, India and Australia eventually created enough space around Antarctica for the development of an Antarctic Circumpolar Current (ACC), that flowed from west to east under the influence of the prevailing westerly winds. Antarctica cooled, its vegetation perished, glaciation began and the continent took on its present-day appearance. Today the ice that overlies the bedrock is up to 4 km thick, and surface temperatures as low as -89.2 deg C have been recorded. The icy blast that howls over the ice cap and out to sea-the so-called katabatic wind-can reach 300 km/hr, creating fearsome wind-chill effects.

D Out of this extreme environment come some powerful forces that reverberate around the world. The Earth's rotation, coupled to the generation of cells of low pressure off the Antarctic coast, would allow Astronauts a view of Antarctica that is as beautiful as it is awesome. Spinning

away to the northeast, the cells grow and deepen, whipping up the Southern Ocean into the mountainous seas so respected by mariners. Recent work is showing that the temperature of the ocean may be a better predictor of rainfall in Australia than is the pressure difference between Darwin and Tahiti-the Southern Oscillation Index. By receiving more accurate predictions, graziers in northern Queensland are able to avoid overstocking in years when rainfall will be poor. Not only does this limit their losses but it prevents serious pasture degradation that may take decades to repair. CSIRO is developing this as a prototype forecasting system, but we can confidently predict that as we know more about the Antarctic and Southern Ocean we will be able to enhance and extend our predictive ability.

E The ocean’s surface temperature results from the interplay between deep-water temperature, air temperature and ice. Each winter between 4 and 19 million square km of sea ice form, locking up huge quantities of heat close to the continent. Only now can we start to unravel the influence of sea ice on the weather that is experienced in southern Australia. But in another way the extent of sea ice extends its influence far beyond Antarctica. Antarctic krill-the small shrimp-like crustaceans that are the staple diet for baleen whales, penguins, some seals, flighted sea birds and many fish-breed well in years when sea ice is extensive, and poorly when it is not. Many species of baleen whales and flighted sea birds migrate between the hemispheres and when the krill are less abundant they do not thrive.

F The circulatory system of the world’s oceans is like a huge conveyor belt, moving water and dissolved minerals and nutrients from one hemisphere to the other and from the ocean’s abyssal depths to the surface. The ACC is the longest current in the world, and has the largest flow. Through it, the deep flows of the Atlantic, Indian and Pacific Oceans are joined to form part of a single global thermohaline circulation. During winter, the howling katabatics sometimes scour the ice off patches of the sea's surface leaving large ice-locked lagoons, or ‘polynyas’. Recent research has shown that as fresh sea ice forms, it is continuously stripped away by the wind and may be blown up to 90 km in a single day. Since only fresh water freezes into ice, the water that remains becomes increasingly salty and dense, sinking until it spills over the continental shelf. Cold water carries more oxygen than warm water, so when it rises, well into the northern hemisphere, it reoxygenates and revitalises the ocean. The state of the northern oceans, and their biological productivity, owe much to what happens in the Antarctic.

G Antarctica has, truly, come in from the cold. As we learn more about its effect on climate, ocean circulation and biota we see that it is not a place that is unconnected to the rest of the world; nor is it useless and barren. On the contrary, it is a powerful engine that has impacts on human, animal and plant life across the globe. Australia’s Antarctic scientific research program, undertaken by government and university scientists and facilitated by the *Australian Antarctic Division*, publishes about 300 research papers and articles annually and is fully engaged in answering fundamental questions about the Continent’s physical and biological attributes, and its role in System Earth. Much of this research was on show at the Australian Academy of Technological Sciences and Engineering’s symposium “Looking South-Managing Technology, Opportunities and the Global Environment” held in Hobart late last year.

Questions 1-5

Reading Passage 2 has seven paragraphs, A-G.

Which paragraph contains the following information?

1 the effect of weather prediction on agriculture

2 sea ice brings life back to Antarctica

3 sea ice formation contributes to northern hemisphere’s vitality

4 the explanation of antarctic climate change

5 Antarctica was once a forgotten continent

Questions 6-8

Please match the natural phenomenon with correct related factor

A ice
B wind
C air pressure

6 Southern Oscillation Index

7 Fresh Water

8 Antarctic Circumpolar Current (ACC)

Questions 9-14

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

9 Why do Australian farmers value the prediction system?

A Farming method varies according to different climate.

B Prevent grassland from degradation.

C Prevent animal from dying.

D A cell provides fertilizer for the grassland.

10 What would happen to sea creatures if sea ice decreases?

A Whales are active around sea ice.

B Seabirds are affected by high sea level.

C The number of seals decreases due to failure to breed.

D Krills fail to reproduce babies successfully.

11 What is the effect of katabatic winds?

A Increase the moving speed of sea ice.

B Increase salt level near ocean surface.

C Bring fresh ice into southern ocean.

D Pile up small hills of ice cap.

12 What happens near continent shelf of Antarctica?

A Salt density increases.

B Salt density decreases.

C Bigger than northern hemisphere’s.

D Smaller than northern hemisphere’s.

13 How does Antarctica benefit Northern hemisphere?

A Antarctica has a comparably larger area.

B Salt brings more lives to Northern planet.

C Flowed Cold water is rich in oxygen.

D Sea creatures favor cold currents.

D	**E**	**F**	**C**	**A**

C	A	B	B	D
C	A	C		

Human Navigation-Finding Our Way

A The human positioning system is flexible and capable of learning. Anyone who knows the way from point A to point B-and from A to C-can probably figure out how to get from B to C, too. But how does this complex cognitive system really work? Researchers are looking at several strategies people use to orient themselves in space: guidance, path integration and route following. We may use all three or combinations thereof. As experts learn more about these navigational skills, they are making the case that our abilities may underlie our powers of memory and logical thinking.

B If you ask passersby for help, most likely you will receive information in many different forms. A person who orients herself by a prominent landmark would gesture southward: "Look down there. See the tall, broad MetLife Building? Head for that-the station is right below it". Neurologists call this navigational approach "guidance", meaning that a landmark visible from a distance serves as the marker for one's destination.

C Another city dweller might say: "What places do you remember passing?... Okay. Go toward the end of Central Park, then walk down to St.Patrick's Cathedral. A few more blocks, and Grand Central will be off to your left". In this case, you are pointed toward the most recent place you recall, and you aim for it. Once there you head for the next notable place and so on, retracing your path. Your brain is adding together the individual legs of your trek into a cumulative progress report. Researchers call this strategy "path integration". Many animals rely primarily on path integration to get around, including insects, spiders, crabs and rodents. The desert ants of the genus Cataglyphis employ this method to return from foraging as far as 100 yards away. They note the general direction they came from and retrace their steps, using the polarization of sunlight to orient themselves even under overcast skies. On their way back they are faithful to this inner homing vector. Even when a scientist picks up an ant and puts it in a totally different spot, the insect stubbornly proceeds in the originally determined direction until it has gone "back" all of the distance it wandered from its nest. Only then does the ant realize it has not succeeded, and it begins to walk in successively larger loops to find its way home.

D Whether it is trying to get back to the anthill or the train station, any animal using path integration must keep track of its own movements so it knows, while returning, which segments it has already completed. As you move, your brain gathers data from your environment-sights, sounds, smells, lighting, muscle contractions, a sense of time Passing-to determine which way your body has gone. The church spire, the sizzling sausages on that vendor's grill, the open courtyard, the train station-all represent snapshots of memorable junctures during your journey.

E In addition to guidance and path integration, we use a third method for finding our way. An office worker you approach for help on a Manhattan street corner might say: "Walk straight

down 5th, turn left on 47th, turn right on Park, go through the walkway under the Helmsley Building, then cross the street to the MetLife Building into Grand Central.” This strategy, called route following, uses landmarks such as building and street names, plus directions-straight, turn, go through-for reaching intermediate points. Route following is more precise than guidance or path integration, but if you forget the details and take a wrong turn, the only way to recover is to backtrack until you reach a familiar spot, because you do not know the general direction or have a reference landmark for your goal. The route-following navigation strategy truly challenges the brain. We have to keep all the landmarks and intermediate directions in our head. It is the most detailed and therefore most reliable method, but it can be undone by routine memory lapses. With path integration, our cognitive memory is less burdened, it has to deal with only a few general instructions and the homing vector. Path integration works because it relies most fundamentally on our knowledge of our body’s general direction of movement, and we always have access to these inputs. Nevertheless, people often choose to give route-following directions, in part because saying “Go straight that way!” just does not work in our complex, man-made surroundings.

F Road Map or Metaphor? On your next visit to Manhattan you will rely on your memory to get around. Most likely you will use guidance, path integration and route following in various combinations. But how exactly do these constructs deliver concrete directions? Do we humans have, as an image of the real world, a kind of road map in our heads-with symbols for cities, train stations and churches, thick lines for highways, narrow lines for local streets? Neurobiologists and cognitive psychologists do call the portion of our memory that controls navigation a “cognitive map”. The map metaphor is obviously seductive: maps are the easiest way to present geographic information for convenient visual inspection. In many cultures, maps were developed before writing, and today they are used in almost every society. It is even possible that maps derive from a universal way in which our spatial-memory networks are wired.

G Yet the notion of a literal map in our heads may be misleading, a growing body of research implies that the cognitive map is mostly a metaphor. It may be more like a hierarchical structure of relationships. To get back to Grand Central, you first envision the large scale-that is, you visualize the general direction of the station. Within that system you then imagine the route to the last place you remember. After that, you observe your nearby surroundings to pick out a recognizable storefront or street corner that will send you toward that place. In this hierarchical, or nested, scheme, positions and distances are relative, in contrast with a road map, where the same information is shown in a geometrically precise scale.

Questions 15-19

Use the information in the passage to match the category of each navigation method (listed A-C) with correct statement.

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

A guidance
B path integration
C route following

15 Using basic direction from starting point and light intensity to move on.

16 Using combination of place and direction for destination.

17 Using a well-known building near your destination as orientation.

18 Using a retrace method from a known place if a mistake happens.

19 Using a passed spot as reference for a new integration.

Questions 20-22

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

20 What does the ant of Cataglyphis respond if it has been taken to another location?

A changes orientation sensors improvidently

B releases biological scent for help from others

C continues to move by the original orientation

D totally gets lost once disturbed

21 Which of the following is true about ‘‘cognitive map’’ in this passage?

A there is no obvious difference contrast by real map

B it exists in our head and always correct

C it only exists under some cultures

D it is managed by brain memory

22 Which of the following description of way findings correctly reflects the function of cognitive map?

A it visualizes a virtual route in a large scope

B it reproduces an exact details of every landmark

C observation plays a more important role

D store or supermarket is a must in the map

Questions 23-27

Do the following statements agree with the information given in Reading Passage 2?

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts with the information*
NOT GIVEN	*if there is no information on this*

23 Biological navigation has a state of flexibility.

24 You will always receive good reaction when you ask direction.

25 When someone follows a route, he or she collects comprehensive perceptional information in mind on the way.

26 Path integration requires more thoughts from brain compared with route-following.

27 In a familiar surrounding, your head will automatically figure out an exact map of where you are.

B	**C**	**A**	**C**	**B**
C	**D**	**A**	**TRUE**	**NOT GIVEN**
TRUE	**FALSE**	**NOT GIVEN**		

Learning by Examples

A Learning theory is rooted in the work of Ivan Pavlov, the famous scientist who discovered and

documented the principles governing how animals (humans included) learn in the 1900s. There is two basic kinds of learning or conditioning occur; classical condition and instrumental condition. Instrumental conditioning happens when an animal learns to perform particular behaviors in order to obtain an intrinsically rewarding stimulus. Instrumental conditioning has occurred when a trained dolphin leaps out of the water in order to obtain a fish reward, and when a human employee shows up at work in exchange for a paycheck. Classical conditioning happens when an animal learns to associate a neutral stimulus(signal)with a stimulus that has intrinsic meaning based on how closely in time the two stimuli are presented. The classic example of classical conditioning is a dog's ability to associate the sound of a bell(something that originally has no meaning to the dog)with the presentation of food (something that has a lot of meanings for the dog) a few moments later. Dogs are able to learn the association between bell and food, and will salivate immediately after hearing the bell once this connection has been made. Years of learning research have led to the creation of a highly precise learning theory that can be used to understand and predict how and under what circumstances most animal will learn, including human beings, and eventually help people figure out how to change their behaviors. (This test is offered by IELTS break up master, www.ysfsds.com)

B Role models are a popular notion for guiding children development, but in recent years very interesting research has been done on learning by example in other animals. If the subject of animal learning is taught very much in terms of classical or operant conditioning, it places too much emphasis on how we allow animals to learn and not enough on how they are equipped to learn. To teach a course of mine I have been dipping profitably into a very interesting and accessible compilation of papers on social learning in mammals, including chimps and human children, edited by Heyes and Galef.

C The research reported in one paper started with a school field trip to Israel to a pine forest where many pine cones were discovered, stripped to the central core. So the investigation started with no weighty theoretical intent, but was directed at finding out what was eating the nutritious pine seeds and how they managed to get them out of the cones. The culprit proved to be the versatile and athletic black rat(Rattus rattus)and the technique was to bite each cone scale off at its base, in sequence from base to tip following the spiral growth pattern of the cone.

D Urban black rats were found to lack the skill and were unable to learn it even if housed with experiences cone strippers. However, infants of urban mothers cross fostered to stripper mothers acquired the skill, whereas infants of stripper mothers fostered by an urban mother could not. Clearly the skill had to be learned from the mother. Further elegant experiments showed that naive adults could develop the skill if they were provided with cones from which the first complete spiral of scales had been removed, rather like our new photocopier which you can word out how to use once someone has shown you how to switch it on. In case of rats, the youngsters take cones away from the mother when she is still feeding on them, allowing them to acquire the complete stripping skill.

E A good example of adaptive bearing we might conclude, but let's see the economies. This was determined by measuring oxygen uptake of a rat stripping a cone in a metabolic chamber to calculate energetic cost and comparing it with the benefit of the pine seeds measured by calorimeter. The cost proved to be less than 10% of the energetic value of the cone-an acceptable profit margin.

F A paper in 1996 Animal Behavior by Bednekoff and Balda provides a different view of the

adaptiveness of social learning. It concerns the seed catching behavior of Clark’ s nutcracker (Nucifraga Columbiana) and the Mexican jay (Aphelocoma ultramarine). The former is a specialist, caching 30，000 or so seeds in scattered locations that it will recover over the months of winter, the Mexican jay will also cache food but is much less dependent upon this than the nutcracker． The two species also differ in their social structure， the nutcracker being rather solitary while the jay forages in social groups．

G The experiment is to discover not just whether a bird can remember where it hid a seed but also if it can remember where it saw another bird hiding a seed. The design is slightly comical with a cacher bird wandering about a room with lots of holes in the floor hiding food in some of the holes, while watched by an observer bird perched in a cage. Two days later cachers and observers are tested for their discovery rate against an estimated random performance． In the role of cacher, not only nutcracker but also the less specialized jay performed above chance； more surprisingly, however, jay observers were as successful as jay cachers whereas nutcracker observers did no better than chance. It seems that, whereas the nutcracker is highly adapted at remembering where it hid its own seeds, the social living Mexican jay is more adept at remembering, and so exploiting the caches of others.

Questions 28-31

Reading Passage 3 has seven paragraphs A-G． Which paragraph contains the following information?

28 A description of a cost-effectiveness experiment．

29 An analogy between rat's learning and human learning．

30 A mention of the earliest research in animal learning．

31 The discovery of who stripped the pine cone．

Questions 32-35

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

32 The field research to Israel was about black rats' learning way of stripping pine seeds．

33 The pine cones were stripped from bottom to top by black rats．

34 Stripping the pine cones is an innate skill of black rats．

35 Imitating others is a way to learn to use photocopier．

Questions 36-40

Complete the summary below using words from the box．

While the Nutcracker is better at caching seed， the Jay relies 36____on caching food and isthus less specialized in this ability, but more depend on 37_____living． To study their behavior of caching and finding their caches， an experiment was designed and carried out to test these two birds for their ability to remember where they hid the seeds．

In the experiment， while the other 38_____the cacher bird hid seeds in the ground. As a result, capability distinction could be witnessed in Nutcracker and the Mexican Jay in the role of 39_____at finding the seeds-the performance of observing 40_____is inferior to its counterpart．

A less	B more	C solitary	D social	E cacher
F observer	G remembered	H watched	I Jay	J Nutcracker

E	**D**	**A**	**C**	**FALSE**
TRUE	**FALSE**	**TRUE**	**less**	**social**
watched	**observer**	**Nutcracker**		

The Culture of Chimpanzee

Humankind's nearest relative is even closer than we thought. Chimpanzees display remarkable behaviors that can only be described as social customs passed on from generation to generation.

A The similarities between chimpanzees and humans have been studied for years, but in the past decade researchers have determined that these resemblances run much deeper than anyone first thought. For instance, the nut cracking observed in the Tai Forest is far from a simple chimpanzee behavior; rather it is a singular adaptation found only in that particular part of Africa and a trait that biologists consider to be an expression of chimpanzee culture. Scientists frequently use the term “culture” to describe elementary animal behaviors, such as the regional dialects of different populations of songbirds, but as it turns out, the rich and varied cultural traditions found among chimpanzees are second in complexity only to human traditions.

B During the past two years, an unprecedented scientific collaboration, involving every major research group studying chimpanzees, has documented a multitude of distinct cultural patterns extending across Africa, in actions ranging from the animals’ use of tools to their forms of communication and social customs. This emerging picture of chimpanzees not only affects how we think of these amazing Creatures but also alters human beings’ conception of our own uniqueness and hints at ancient foundations for extraordinary capacity for culture.

C Homo sapiens and Pan troglodytes have coexisted for hundreds of millennia and share more than 98 percent of their genetic material, yet only 40 years ago we still knew next to nothing about chimpanzee behavior in the wild. That began to change in the 1960s, when Toshisada Nishida of Kyoto University in Japan and Jane Goodall began their studies of wild chimpanzees at two field sites in Tanzania. Goodall’s research station at Gombe, the first of its kind, is more famous, but Nishida's site at Mahale is the second oldest chimpanzee research site in the world.

D In these initial studies, as the chimpanzees became accustomed to close observation, the remarkable discoveries began. Researchers witnessed a range of unexpected behaviors, including fashioning and using tools, hunting, meat eating, food sharing and lethal fights between members of neighboring communities. In the years that followed, other primatologists set up camp elsewhere, and, despite all the financial, political and logistical problems that can beset African fieldwork, several of these out-posts became truly long-term projects. As a result, we live in an unprecedented time, when an intimate and comprehensive scientific record of chimpanzees’ lives at last exists not just for one but for several communities spread across Africa.

E As early as 1973, Goodall recorded 13 forms of tool use as well as eight social activities that appeared to differ between the Gombe chimpanzees and chimpanzee populations elsewhere. She ventured that some variations had what she termed a cultural origin. But what exactly did Goodall mean by “culture”? According to the Oxford Encyclopedic English Dictionary, culture is defined as “the customs and achievements of a particular time or people”. The diversity of human cultures extends from technological variations to marriage rituals, from culinary habits to myths and legends. Animals do not have myths and legends, of course. But they do have the capacity to pass on behavioral traits from generation to generation, not through their genes but by learning. For biologists, this is the fundamental criterion for a cultural trait: it must be something that can be learned by observing the established skills of others and thus passed on to future generations.

F What of the implications for chimpanzees themselves? We must highlight the tragic loss of chimpanzees, whose populations are being decimated just when we are at last coming to appreciate these astonishing animals more completely. Populations have plummeted in the past century and continue to fall as a result of illegal trapping, logging and, most recently, the bushmeat trade. The latter is particularly alarming: logging has driven roadways into the forests that are now used to ship wild-animal meat including chimpanzee meat to consumers as far afield as Europe. Such destruction threatens not only the animals themselves but also a host of fascinatingly different ape cultures.

G Perhaps the cultural richness of the ape may yet help in its salvation, however. Some conservation efforts have already altered the attitudes of some local people. A few organizations have begun to show videotapes illustrating the cognitive prowess of chimpanzees. One Zairian viewer was heard to exclaim, “Ah, this ape is so like me, I can no longer eat him.”

H How an international team of chimpanzee experts conducted the most comprehensive survey of the animals ever attempted. Scientists have been investigating chimpanzee culture for several decades, but too often their studies contained a crucial flaw. Most attempts to document cultural diversity among chimpanzees have relied solely on officially published accounts of the behaviors recorded at each research site. But this approach probably overlooks a good deal of cultural variation for three reasons.

I First, scientists typically don’t publish an extensive list of all the activities they do not see at a particular location. Yet this is exactly what we need to know-which behaviors were and were not observed at each site. Second, many reports describe chimpanzee behaviors without saying how common they are, without this information, we can’t determine whether a particular action was a once-in-a-lifetime aberration or a routine event that should be considered part of the animals’ culture. Finally, researchers’ descriptions of potentially significant chimpanzee behaviors frequently lack sufficient detail, malting it difficult for scientists working at other spots to record the presence or absence of the activities.

J To remedy these problems, the two scientists decided to take a new approach. They asked field researchers at each site for a list of all the behaviors they suspected were local traditions. With this information in hand, they pulled together a comprehensive list of 65 candidates for cultural behaviors.

K Then Nishida and Goodall distributed our list to the team leaders at each site. In consultation with their colleagues, they classified each behavior in terms of its occurrence or absence in the chimpanzee community studied. The key categories were customary behavior (occurs in most or

all of the able-bodied members of at least one age or sex class，such as all adult males), habitual (less common than customary but occurs repeatedly in several individuals), present (seen at the site but not habitual), absent(never seen), and unknown.

L The extensive survey turned up no fewer than 39 chimpanzee patterns of behavior that should be labeled as cultural variations, including numerous forms of tool use, grooming techniques and courtship gambits. This cultural richness is far in excess of anything known for any other species of animal.

Questions 1-5

Reading Passage 1 has twelve paragraphs, A-L.

Which paragraph contains the following information?

1 an important drawback of method on investing chimpanzee’s culture

2 a method newly designed by two researchers for solving a certain problem

3 listed reasons of why the former means of ape study is questionable

4 grouping statistics according to frequency

5 an example that showing tragic outcome of animals leading to indication of change in local people’s attitude in preservation

Questions 6-9

Answer the questions below.

*Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each answer.*

6 When did the unexpected discoveries of chimpanzee behavior start?

7 Which country is the researching of Toshisada Nishida and Jane Goodall located in?

8 What did the chimpanzees have to get accustomed to at the beginning of the study?

9 What term could describe chimpanzee’s tool using found by Jane Goodall in 1973?

Questions 10-14

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts with the information*
NOT GIVEN	*if there is no information on this*

10 Research found that scientists can make chimpanzees possess the same complex culture as human.

11 Human and apes have already existed together long ago and have almost the same genetic substance.

12 Toshisada Nishida and Jane Goodall revealed many surprising factors of chimpanzee’s social behavior during the initial experiments.

13 Due to the inherited genes, chimpanzees are capable of showing cultural behaviors just like what human do.

14 For decades, researchers have investigated chimpanzees by data obtained from both unobserved and observed approaches.

H	**J**	**I**	**K**	**G**
in the 1960s	**Tanzania**	**observers**	**culture origin**	

NOT GIVEN	**TRUE**	**TRUE**	**FALSE**	**FALSE**

Talc Powder

A Peter Brigg discovers how talc from Luzenac’ s *Trimouns* in France find its way into food and agricultural products-from chewing gum to olive oil. High in the French Pyrenees, some 1,700m above see level, lies Trimouns, a huge deposit of hydrated magnesium silicate-talc to you and me. Talc from Trimouns, and from ten other Luzenac mines across the globe, is used in the manufacture of a vast array of everyday products extending from paper paint and plaster to cosmetics, plastics and car tyres. And of course there is always talc's best known end use: talcum powder for babies’ bottoms. But the true versatility of this remarkable mineral is nowhere better displayed than in its sometimes surprising use in certain niche markets in the food and agriculture industries. (This test is offered by IELTS break up master, www.ysfsds.com)

B Take, for example, the chewing gum business. Every yean Talc de Luzenac France-which owns and operates the Trimouns mine and is a member of the international Luzenac Group (art of RioTinto minerals)-supplies about 6,000 tones of talc to chewing gum manufacturers in Europe. “We’ ve been selling to this sector of the market since the 1960s,” says Laurent Fournier, sales manager in Luzenac’ s Specialties business unit in Toulouse. “Admittedly, in terms of our total annual sales of talc, the amount we supply to chewing gum manufacturers is relatively small, but

we see it as a valuable niche market: one where customers place a premium on securing supplies from a reliable, allegiance to a proven suppler is very much high quality source. Switching sources-in the way that you might choose to buy,” say, “paperclips from SupplierA rather than from Supplier B-is not an easy option for chewing gum manufacturers,” Fournier says “The cost of reformulating is high, so when customers are using a talc grade that works, even if it’s expensive, they are understandably reluctant to switch.”

C But how is talc actually used in the manufacture of chewing gum? Patrick Delord, an engineer with a degree in agronomics, who has been with Luzenac for 22 years and is now senior market development manager, Agriculture and Food, in Europe, explains that chewing gums has four main components. “The most important of them is the gum base,” he says, “It’s the gum base that puts the chew into chewing gum. It binds all the ingredients together, creating a soft, smooth texture. To this the manufacturer then adds sweeteners, softeners and flavourings. Our talc is used as a filler in the gum base. The amount varies between, say, ten and 35 per cent, depending on the type of gum. Fruit flavoured chewing gum, for example, is slightly acidic and would react with the calcium carbonate that the manufacturer might otherwise use as a filler. Talc, on the other hand, makes an ideal filler because it’s non-reactive chemically. In the factory, talc is also used to dust the gum base pellets and to stop the chewing gum sticking during the lamination and packing process,” Delord adds.

D The chewing gum business is，however, just one example of talc’s use in the food sector. For the past 20 years or so, olive oil processors in Spain have been taking advantage of talc’s unique characteristics to help them boost the amount of oil they extract from crushed olives. According to Patrick Delord, talc is especially useful for treating what he calls “difficult” olives. After the olives are harvested-preferably early in the morning because their taste is better if they are gathered in the cool of the day-they are taken to the processing plant. There they are crushed and then stirred for 30-45 minutes. In the old days, the resulting paste was passed through an olive press but nowadays it’s more common to add water and centrifuge the mixture to separate the water and oil from the solid matter. The oil and water are then allowed to settle so that the olive oil layer can be decanted off and bottled. “Difficult” olives are those that are more reluctant than the norm to yield up their full oil content. This may be attributable to the particular species of olive, or to its water content and the time of year the olives are collected-at the beginning and the end of the season their water content is often either too high or too low. These olives are easy to recognize because they produce a lot of extra foam during the stirring process, a consequence of an excess of a fine solid that acts as a natural emulsifier. The oil in this emulsion is lost when the water is disposed of. Not only that, if the waste water is disposed of directly into local fields-often the case in many smaller processing operations-the emulsified oil may take some time to biodegrade and so be harmful to the environment.

E “If you add between a half and two per cent of talc by weight during the stirring process, it absorbs the natural emulsifier in the olives and so boosts the amount of oil you can extract.” says Delord．“In addition，talc’s flat, ‘platey’ structure helps increase the size of the oil droplets liberated during stirring，which again improves the yield．However, because talc is chemically inert, it doesn’t affect the colour, taste, appearance or composition of the resulting olive oil.” (This test is offered by IELTS break up master, www.ysfsds.com)

F If the use of talc in olive oil processing and in chewing gum is long established, new applications in the food and agriculture industries are also constantly being sought by Luzenac. One such promising new market is fruit crop protection, being pioneered in the U.S. Just like people, fruit can get sunburned. In fact, in very sunny regions up to 45 per cent of a typical crop can be affected by heat stress and sunburn. However, in the case of fruit，it's not so much the ultra violet rays which harm the crop as the high surface temperature that the sun's rays Create.

G To combat this, farmers normally use either chemicals or spray a continuous fine canopy of mist above the fruit trees or bushes. The trouble is, this uses a lot of water-normally a precious commodity in hot, sunny areas-and it is therefore expensive. What's more, the ground can quickly become waterlogged. “So our idea was to coat the fruit with talc to protect it from the sun,”says Greg Hunter,a marketing specialist who has been with Luzenac for ten years. “But to do this, several technical challenges had first to be overcome. Talc is very hydrophobic: it doesn’t like water. So in order to have a viable product we needed a wettable powder-something that would go readily into suspension so that it could be sprayed onto the fruit. It also had to break the surface tension of the cutin (the natural waxy, waterproof layer on the fruit)and of course it had to wash off easily when the fruit was harvested. No-one’s going to want an apple that’s covered in talc.”

H Initial trials in the state of Washington in 2003 showed that when the product was sprayed onto Granny Smith apples, it reduced their surface temperature and lowered the incidence of sunburn by up to 60 per cent. Today the new product, known as Invelop Haximum SPF, is in its second commercial year on the US market. Apple growers are the primary target although Hunter believes grape growers represent another sector with long term potential. He is also hopeful of extending sales to overseas markets such as Australia, South America and southern Europe． (This test is offered by IELTS break up master, www.ysfsds.com)

Questions 1-6

Use the information in the passage to match each use of talc power with correct application from ***A, B or C***

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

A Fruit protection
B Chewing gum business
C Olive oil extraction

1 Talc is used to increase the size of drops.

2 Talc is applied to reduce foaming.

3 Talc is employed as a filler of base.

4 Talc is modified and prevents sunburn.

5Talc is added to stop stickiness.

6Talc is used to increase production.

Questions 7-12

Complete the following summary of the paragraphs of Reading Passage1, using ***NO MORE THAN TWO WORDS*** *from the Reading Passage for each answer.*

Spanish olive oil industry has been using talc in oil extraction process for about 7_____ years.

Difficult olives are easy to be spot because they generate lots of 8_____. 9_____is generated in smaller factories contains emulsified oil, which is hard to 10_____ . Consequently, once it is released outside, it could be 11_____ to the environment. However,talc power added in the process enable to absorb the emulsifier oil. It improves the oil extraction production, with aid of talc powder,size of oil 12 _____ increased.

Questions 13-14

*Answer the questions below using **NO MORE THAN THREE WORD** from the passage for each answer.*

13 In which process is talc used to clear the stickness of chewing gum?

14 Which group of farmers does Invelop intend to target in along view?

C	**C**	**B**	**A**	**B**
C	**20**	**foam**	**waste water**	**biodegrade**
harmful	**droplets**	**lamination and packing**	**grape growers**	

Coral Reefs

Coral reefs are underwater structures made from calcium carbonate secreted by corals. Most coral reefs are built from stony corals, which in turn consist of polyps that cluster in groups. They from some of the world's most productive ecosystems and are of great economy value. But with the wide intervention of human, Coral reefs are now facing increasing danger.

A Coral reefs are estimated to cover 284, 300 km^2 just under 0.1%of the ocean’s surface area, about half the area of France. The Indo-Pacific region accounts for 91.9% of this total area. Southeast Asia accounts for 32.3% of that figure, while the Pacific including Australia accounts for 40.8%, Atlantic and Caribbean coral reefs account for 7.6%. Yet often called “rainforests of the sea”, coral reefs form some of the most diverse ecosystems on Earth. They provide a home for 25% of all marine species, including fish, mollusks, worms, crustaceans, echinoderms, sponges, tunicates and other cnidarians. Deep water coral can exist at greater depths and colder temperatures at much higher latitudes, as far north as Norway. Coral reefs are rare along the American and African west coasts. This is due primarily to upwelling and strong cold coastal currents that reduce water temperatures in these areas, respectively the Peru, Benguela and Canary streams. Corals are seldom found along the coastline of South Asia from the eastern tip of India, Madras, to the Myanmar borders. They are also rare along the coast around northeastern South America and Bangladesh due to the freshwater release from the Amazon and Ganges Rivers respectively.

B Coral reefs deliver ecosystem services to tourism, fisheries and coastline protection. The global economic value of coral reefs has been estimated at as much as US $375 billion per year. Coral reefs protect shorelines by absorbing wave energy, and many small islands would not exist without their reef to protect them.

C The value of reefs in biodiverse regions can be even higher. In parts of Indonesia and the Caribbean where tourism is the main use, reefs are estimated to be worth US $1 million per square kilometer, based on the cost of maintaining sandy beaches and the value of attracting snorkelers and scuba divers. Meanwhile, a recent study of the Great Barrier Reef in Australia shows that the reef is worth more to the country as an intact ecosystem than an extractive reserve for fishing. Each year more than 1.8 million tourists visit the reef, spending an estimated AU $4.3 billion on reef-related industries from diving to boat rental to posh island resort stays. In the Caribbean, says UNEP, the net annual benefits from diver tourism was US $2 billion in 2000 with US $625 million spent directly on diving on reefs. Further, reef tourism is important source of employment, especially for some of the world's poorest people. UNEP says that of the estimated 30 million small-scale fishers in the developing world, most are dependent to a greater or lesser extent on coral reefs. In the Philippines, for example, more than one million small-scale fishers depend directly on coral reefs for their livelihoods. The report estimates that reef fisheries were worth between $15,000 and $150,000 per square kilometer a year, while fish caught for aquariums were works $500 a kilogram against $6 for fish caught as food. The aquarium fish export industry supports around 50,000 people and generates some US $5.5 million a year in Sri Lanka along.

D Unfortunately, coral reefs are dying around the world. In particular, coral mining, agricultural and urban runoff, pollution (organic and inorganic), disease, and the digging of canals and access into islands and bays are localized threats to coral ecosystems. Broader threats are sea temperature rise, sea level rise and pH changes from ocean acidification, all associated with greenhouse gas emissions. Some current fishing practices are destructive and unsustainable. These include cyanide fishing, overfishing and blast fishing. Although cyanide fishing supplies live reef fish to the tropical aquarium market, most fish caught using this method are sold in restaurants, primarily in Asia, where live fish are prized for their freshness. To catch fish with cyanide, fishers dive down to the reef and squirt cyanide in coral crevices and on the fast-moving fish to stun the fish making them easy to catch. Overfishing is another leading cause for coral reef degradation. Often, too many fish are taken from one reef to sustain a population in that area. Poor fishing practices, such as banging on the reef with sticks(muro-ami), destroy coral formations that normally function as fish habitat. In some instances, people fish with explosives (blast fishing), which blast apart the surrounding coral.

E Tourist resorts that empty their sewage directly into the water surrounding coral reefs contribute to coral reef degradation. Wastes kept in poorly maintained septic tanks can also leak into surrounding ground water, eventually seeping out to the reefs. Careless boating, diving, snorkeling and walk on, or stir up sediment in the reefs, they contribute to coral reef destruction. Corals are also harmed or killed when people drop anchors on them or when people collect coral.

F To find answers for these problems, scientists and researchers study the various factors that impact reefs. The list includes the ocean a role as a carbon dioxide sink, atmospheric changes, ultraviolet light, ocean acidification, viruses, impacts of dust storms carrying agent to far flung reefs, pollutants, algal blooms and others. Reefs are threatened well beyond coastal areas. General estimates show approximately 10% of the world’s coral reefs are dead. About 60% of the world's reefs are at risk due to destructive, human-related activities. The threat to the health of reefs is particularly strong in Southeast Asia, where 80% of reefs are endangered.

G In Australia, the Great Barrier Reef is protected by the Great Barrier Reef Marine Park Authority,

and is the subject of much legislation, including a biodiversity action plan. Inhabitants of Ahus Island, Manus Province, Papua New Guinea, have followed a generations, old practice of restricting fishing in six areas of their reef lagoon. Their cultural traditions allow line fishing, but net or spear fishing. The result is both the biomass and individual fish sizes are significantly larger than in places where fishing is unrestricted.

Questions 28-33

Reading Passage 3 has seven paragraphs A-G.

Which paragraph contains the following information?

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

28 geographical location of world’s coral reef

29 the benefit of coral reef to the local economy

30 the statistics of coral reef’s ecological significance

31 the listed reasons for decreasing coral reef

32 people’s inappropriate physical access to coral reef

33 the mined fishing behavior in partial regions

Questions 34-39

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts with the information*
NOT GIVEN	*if there is no information on this*

34 Coral reefs provide habitat to various kinds of undersea life.

35 Coral reefs distribute around the ocean disproportionately.

36 The scientific value of coral reef is much more important than other aspects.

37 Coral reefs are greatly exchanged among and exported to other countries.

38 Reef tourism is generally fundamental for part of the poor in economy.

39 Compared with fishing for aquariums, coral fishery do not fit for women and children.

Question 40

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

40 What is the main purpose of this passage?

A to indicate the growing process of coral reef

B to present the general benefits and the endangered situations of coral reef

C to show the vital efforts made to protect coral reef in Australia

D to help ordinary people understand coral reef better

A	**C**	**A**	**D**	**E**
D	**TRUE**	**TRUE**	**NOT GIVEN**	**NOT GIVEN**

TRUE	**NOT GIVEN**	**B**		

Questions 1-4

The reading passage has six paragraphs, ***A-F****.*

Choose the correct heading for paragraphs, ***A-E,*** *from the list below.*

List of Headings

i Approaches made by two famous educator
ii Children hand to work to alleviate burden on family
iii Why children are not highly valued
iv Children died in hospital at their early age
v Politics related philosophy appeared
vi Creative learning method was applied on certain wild kid
vii Emerge and spread of called kindergarten

Example	Answer
Paragraph B	ii

1 Paragraph A
2 Paragraph C
3 Paragraph D
4 Paragraph E

Education Philosophy of Children

A In 1660s, while there are few accurate statistics for child mortality in the preindustrial world, there is evidence that as many as 30 percent of all children died before they were 14 days old. Few families survived intact. All parents expected to bury some of their children and they found it difficult to invest emotionally in such a tenuous existence as a newborn child. When the loss of a child was commonplace, parents protected themselves from the emotional consequences of the death by refusing to make an emotional commitment to the infant． How else can we explain mothers who call the infant “it”, or leave dying babies in gutters, or mention the death of a child in the same paragraph with a reference to pickles?

B One of the most important social changes to take place in the Western world in 18th century was the result of the movement from an agrarian economy to an industrial one. Increasingly, families left the farms and their small town life and moved to cities where life was very different

for them. Social supports that had previously existed in the smaller community disappeared, and problems of poverty, crime, sub-standard housing and disease increased. For the poorest children，childhood could be painfully short， as additional income was needed to help support the family and young children were forced into early employment. Children as young as 7 might be required to work full-time jobs, often under unpleasant and unhealthy circumstances, from factories to prostitution. (This test is offered by IELTS break up master, www.ysfsds.com)

C Over the course of the 1800s, establishing a background the technological advance of the mid-1880s, coupled with the creation of a middle class and the redefinition of roles of family members, meant that work and home became less synonymous over the course of time. People began to buy their children toys and books to read． As the country slowly became more dependent upon machines for work, both in rural and in urban areas, it became less necessary for children to work inside the home. With the beginning of the Industrial Revolution, John Locke was one of the most influential writers of his period. His writings on the role of government are seen as foundational to many political movements and activities, including the American Revolution and the drafting of the Declaration of Independence. His ideas are equally foundational to several areas of psychology. As the father of “British empiricism”. Locke made the first clear and comprehensive statement of the“environmental position” and by so doing，became the father of modern learning theory. His teachings about child care were highly regarded during the colonial period in America.

D Jean Jacquesd Rousseau lived during an era of the American and French Revolution. His works condemn distinctions of wealth, property, and prestige. In the original state of nature，according to Rousseau，people were“noble savages”, innocent, free and uncorrupted. Rousseau conveyed his educational philosophy through his famous novel *Emile*，in 1762, which tell the story of a boy’s education from infancy to adulthood． Rousseau observed children and adolescents extensively and spoke of children’ s individuality,but he based much of his developmental theory on observation in writing the book, and on the memories of his own childhood. Rousseau contrasts children to Developmental Psychology in Historical Perspective adults and describes age-specific characteristics. Johan Heinrich Pestalozzi lived during the early stages of industrial revolution, he sought to develop schools would nurture children’s development. He agreed with Rousseau that humans are naturally good but were spoiled by a corrupt society. Pestalozzi’ s approach to teaching can be divided into the general and special methods. The theory was designed to create a emotionally healthy homelike learning environment that had to be in place before more specific instruction occurred.

E One of the best documented cases of all the so-called feral children concerned a young man who was captured in a small town in the south of France in 1800, and who was later named Victor. The young man had been seen in the area for months before his final capture-pre-pubescent, mute, and naked, perhaps 11 or 12 years old, foraging for food in the gardens of the locals and sometimes accepting their direct offers of food． Eventually he was brought to Paris, where it was hoped that he would be able to answer some of the profound questions about the nature of man, but that goal was quashed very early. Jean-Marc-Gaspard Itard， a young physician who had become interested in working with the deaf, was more optimistic about a future for Victor and embarked on a five-year plan of education to civilize him

and teach him to speak. With a subsidy from the government, Itard spent an enormous amount of time and effort working with Victor. He was able to enlist the help of a local woman, Madame Gu erin, to assist in his efforts and provide a semblance of a home for Victor. But, after five years and despite all of his efforts, Itard considered the experiment to be a failure． Victor's lessons were discontinued, although he continued to live with Madame Gu erin until his death, approximately at the age of 40.

F Other educators were beginning to respond to the simple truth that was embedded in the philosophy of Rousseau. One of the early examples of this approach was the invention of the kindergarten—a word and a movement created by Friedrich Froebel in 1840, a German-born educator. Froebel placed particular emphasis on the importance of play in a child’s learning．His invention, in different forms, would eventually find its way around the world. His ideas about education were initially developed through his association with Johann Heinrich Pestalozzi. Froebel spent five years teaching at one of Pestalozzi’ s model schools in Frankfurt, and later he studied with Pestalozzi himself. Eventually he was able to open his own schools to test his educational theories. One of his innovative ideas was his belief that women could serve as appropriate educators of young children-an unpopular view at the time. At the age of 58, after almost four decades as a teacher, Froebel introduced the notion of the kindergarten．By the time of Froebel’ s death in 1852, dozens of kindergartens had been created in Germany. Their use increased in Europe and the movement eventually reached and flourised in the United Stated in 20th century.

Questions 5-8

*Use the information in the passage 1 to match the time (1isted **A-C**) with correct event below.*

A 18th century
B 19th century
C 20th century

5 children need to work

6 rise of middle class

7 emergence of a kindergarten

8 the kindergarten in the spread around US

Questions 9-13

*Use the information in the passage to match the people(1isted**A-D**)with opinions or deeds below.*

A Jean Jacquesd Rousseau
B Jean-Marc-Gaspard Itard
C Johan Heinrich Pestalozzi
D Friedrich Froebel

9 was not successful to prove the theory．

10 combined development of both other children and himself．

11 promoted some emotional activities between school and family．

12 corruption is not a characteristic in people’ s nature．

13 responsible for the increased number of a type of school in Germany

iv	**v**	**i**	**vi**	**A**

B	**B**	**C**	**B**	**A**
C	**A**	**D**		

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 a 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 One cause which has been suggested for changes in pronunciation is geographic and climatic, for example that people living in mountain country are subject to certain changes in pronunciation compared to plainsmen， but the evidence for this is unconvincing. Other people have suggested biological and racial factors：it has been said，for example，that races with thick lips have difficulty in producing certain speech-sounds. Once again，no really convincing evidence has been produced. But in these circumstances the theory is unnecessary: the influence of one language on another is quite enough to explain such changes, without racial characteristics being invoked.

D 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 may gain or lose prestige. It is said that, after the Russian Revolution of 1917，the upper-class 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.

E 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. For some of these random variations to be selected at the expense of others，there must be further forces at work.

F 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 foopball.

G 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：kən] to ['ba：kə]，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 27-29

Complete the summary below

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

The pronunciation of living language undergo changes through out thousands of years. Changes from[b]consonants to [P]consonants are usually called 27_____. There are three reasons for these changes: Firstly, the influence of one language on another is an adequate explanation since no disagreement being put forward. Secondly, 28_____involving imitation is associated with the spread of this linguistic phenomenon. The incomplete imitations of children，moreover, may also contribute to this change if they are only deviations. However, for those random variations in pronunciation, the deeper evidence lies in the 29_____or minimization of effort.

Questions 30-37

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

30 The most controversial aspect of linguistic changes is the use of word.

31 It is possible for US to know the early pronunciation of some certain words.

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

33 some kind of languages change more significantly than other languages.

34 All the children learning speeches from adults cannot have the accurate pronunciation all the time.

35 The word scant can be pronounced more easily than skamt.

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

37 The sound of ‘temporary’ cannot be presented by 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**.*

A Since the speakers can receive less effort
B Due to the pronunciation cannot present the spelling accurately
C It is a language influencing other languages in a large scale
D Because the speaker can pronounce[n]and[t]clearly in the same place

38 As a consequence, ‘b’ will be pronounced as ‘P’

39 The pronunciation of[m]changed to [n]

40 The omit of ‘t’ in the sound of Christmas

sound laws	**fashion**	**principles of ease**	**FALSE**	**TRUE**
TRUE	**NOT GIVEN**	**FALSE**	**TRUE**	**NOT GIVEN**
TRUE	**C**	**D**	**A**	

T-Rex Hunter

T-Rex which stands for “Tyrannosaurus”, was a bipedal carnivore with a massive skull balanced by a long, heavy tail. When we talk about T-Rex, there comes an image of a cruel and ruthless hunting. However, a genius scientist, Jack Homer, doubts about the view.

A Jack Homer is an unlikely academic: his dyslexia is so bad that he has trouble reading a book. But he can read the imprint of life in sandstone or muddy shale across a distance of 100 million years, and it is this gift that has made him curator of palaeontology at Montana State University’s Museum of the Rockies, the leader of a multi-million dollar scientific project to expose a complete slice of life 68m years ago, and a consultant to Steven Spielberg and other Hollywood figures.

B His father had a sand and gravel quarry in Montana, and the young Homer was a collector of stones and bones, complete with notes about when and where he found them. “My father had owned a ranch when he was younger, in Montana,” he says. “He was enough of a geologist, being a sand and gravel man, to have a pretty good notion that they were dinosaur bones. So when I was eight years old he took me back to the area that had been his ranch, to where he had seen these big old bones. I picked up one. I am pretty sure it was the upper arm bone of a duckbilled dinosaur: it probably wasn’t a Maiasaura but closely related to that. I catalogued it, and took good care of it, and then later when I was in high school, excavated my first dinosaur skeleton. It obviously started earlier than eight and I literally have been driven ever since. I feel like I was born this way.” Homer spent seven years at university, but never graduated. “I have a learning disability, I would call it a learning difference-dyslexia, they call it-and I just had a terrible time with English and foreign languages and things like that. For a degree in geology or biology they required two years of a foreign language. There was no way in the world I could do that. In fact, I didn't really pass English. So I couldn't get a degree, I just wasn’t capable of it. But I took all of the courses required and I wrote a thesis and I did all sorts of things. So I have the education, I just don’t have the piece of paper,” he says.

C In Montana, in those days, everybody had the right to a college education. His grades at high school had been terrible. At university, his advisers recognised that he was having a hard time, and went on helping him. The Dean who kept readmitting him, was to give Homer an honorary doctorate years later. As a young non-graduate, Homer wrote to every museum in the English-speaking world, asking for a job. Los Angeles County Museum and the Royal Ontario Museum in Toronto made offers, but he accepted a post as technician at Princeton University, New Jersey.

D When Homer works in the lab of Princeton， he is involved in the study of the well-accepted Killing machine, T-Rex, and has some unusual and shocking findings. “We definitely know we are working on a very broad coastal plain with the streams and rivers bordered by conifers and

hardwood plants, and the areas in between these rivers were probably fern-covered. There were no grasses at all: just ferns and bushes---an unusual landscape, kind of taking the southeastern United States---Georgia, Florida, and mixing it with the moors of England and flattening it out,” he says. “Triceratops is very common: they are the cows of the Cretaceous, they are everywhere. Duckbilled dinosaurs are relatively common but not as common as triceratops and T-Rex, for a meat-eating dinosaur, is very uncommon. What we would consider the predator-prey ratio seems really off the scale. What is interesting is the little Dromaeosaurs, the ones we know for sure were good predators, we haven’t found any of them.”

E Those all are why he sees T-Rex not as the lion of the Cretaceous savannah but its vulture. “Look at the wildebeest that migrate in the Serengeti of Africa, a million individuals lose about 200, 000 individuals in that annual migration. There is a tremendous carrion base there. And so you have hyenas, you have tremendous numbers of vultures that are scavenging, you don’t have all that many animals that are good predators. If T-Rex was a top predator, especially considering how big it is, you’d expect it to be extremely rare, much rarer than the little dromaeosaurs, and yet they are everywhere, they are a dime a dozen,” he says. A 12-tonne T-Rex is a lot of vulture, but he doesn’t see the monster as clumsy. He insisted his theory and finding, dedicated to further research upon it. Of course, he would like to reevaluate if there is any case that additional evidence found or explanation raised by others in the future.

F In order to support his viewpoint, he examined the leg bones of the T-Rex, and compared the length of the thigh bone (upper leg), to the shin bone (lower leg). He found that the thigh bone was equal in length or slightly longer than the shin bone, and much thicker and heavier, which proves that the animal was built to be a slow walker rather than fast running. On the other hand, the fossils of fast hunting dinosaurs always showed that the shin bone was longer than the thigh bone. This same truth can be observed in many animals of today, which are designed to run fast: the ostrich, cheetah, etc.

G He also studied the fossil teeth of the T-Rex, and compared them with the teeth of the Velociraptor, and put the nail in the coffin of the “hunter T-Rex theory”. The Velociraptor’s teeth were like stake knifes: sharp, razor-edged, and capable of tearing through flesh with ease. The T-Rex’s teeth were huge, sharp at their tip, but blunt, propelled by enormous jaw muscles, which enabled them to only crush bones.

H With the evidence presented in his documentary, Homer was able to prove that the idea of the T-Rex as being a hunting and ruthless killing machine is probably just a myth. In light of the scientific clues he was able to unearth, the T-Rex was a slow, sluggish animal which had poor vision, an extraordinary sense of smell, that often reached its “prey” after the real hunters were done feeding, and sometimes it had to scare the hunters away from a corpse. In order to do that, the T-Rex had to have been ugly, nasty-looking, and stinky. This is actually true of nearly all scavenger animals. They are usually vile and nasty looking.

Questions 1-7

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

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts*

NOT GIVEN *if there is no information on this*

1 Jack Homer knew exactly that the bone, discovered in his father’s ranch, belonged to a certain type of dinosaur.

2 He was given a geology degree when graduated from university.

3 Jack Homer is the man who first discovered bones of T-Rex around the world.

4 Jack Homer believes that the prey should outnumber the predator.

5 T-Rex had the same amount of population as the vulture in Serengeti.

6 The predator-prey ratio found by Jack contradicts with the hypothesis that T-Rex being top predator.

7 Jack is unwilling to recognise any other viewpoints about the category of T-Rex.

Questions 8-13

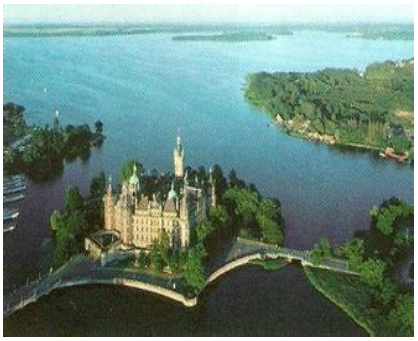
Complete the following summary of the paragraphs of Reading Passage 1, using ***NO MORE THAN TWO WORDS*** *from the Reading Passage l for each answer.*

In the investigation of bones of the T-Rex. Homer found that the 8_____ may be equivalent of a bit shorter than the thigh bone. This finding indicated that the T-Rex was actually a 9_____, unlike other swift animals such as the 10_____or ostrich, which are built to 11_____. The study of fossil teeth also verified his opinion. Compared with the sharp teeth of Velocireptor, T-Rex’s teeth were huge but rather 12_____which can just 13_____ hard bones.

TRUE	FALSE	NOT GIVEN	TRUE	NOT GIVEN
TRUE	FALSE	shin bone	slow walker	cheetah
run fast	blunt	crush		

Water Treatment : Reed Bed

A Nowadays subsurface flow wetlands are a common alternative in Europe for the treatment of waste water in rural areas. Mainly in the last 10 to 12 years there has been a significant growth in the number and size of the systems in use. Compared to common treatment facilities, wetlands are lower in cost investment, lesser to maintain, and are ideal for densely populated rural or suburban areas rather than urban areas.



B The Common Reed has the ability to transfer oxygen from its leaves, down through its stem and rhizomes, and out via its root system. As a result of this action, a very high population of micro-organisms occurs in the root system, with zones of aerobic, anoxic, and anaerobic conditions. Therefore with the waste water moving very slowly and carefully through the mass of Reed roots, this liquid can be successfully treated.

C A straightforward definition of a reed bed is if you have dirty water in your pool or water, which is heavily polluted, Reed Beds will be planted to make the water clean again. This is good for ecology and living organisms and fish in the water. Reed Beds have a wide range of qualities and

are acceptable for cleaning everything from secondary to tertiary treatment of mild domestic effluent, to rural waste and even heavy industrial contaminants. The reason why they're so effective is often because within the bed's root sector, natural biological, physical and chemical processes interact with one another to degrade or remove a good range of pollutants. Reed beds can be built in a number of variants, but mainly they are of the horizontal flow or vertical (down) flow configuration where water flows through the beds horizontally or vertically.

Horizontal Flow Reed Bed Systems

D Horizontal-flow wetlands may be of two types: free-water surface-flow (FWF) or sub-surface water-flow (SSF). In the former the effluent flows freely above the sand/gravel bed in which the reeds etc. are planted; in the latter effluent passes through the sand/gravel bed. In FWF-type wetlands, effluent is treated by plant stems, leaves and rhizomes. Such FWF wetlands are densely planted and typically have water-depths of less than 0.4m. However, dense planting can limit oxygen diffusion into the water. These systems work particularly well for low strength effluents or effluents that have undergone some form of pretreatment and play an invaluable role in tertiary treatment and the polishing of effluents. The horizontal reed flow system uses a long reed bed, where the liquid slowly flows horizontally through. The length of the reed bed is about 100 meters. The downside of the horizontal reed beds is that they use up lots of land space and they do take quite a long time to produce clean water.

Vertical Flow Reed Bed Systems

E A vertical flow reed bed is a sealed, gravel filled trench with reeds growing in it (see the picture below). The common reed oxygenates the water, which helps to create the right environment for colonies of bacteria to break down unwanted organic matter and pollutants. The reeds also make the bed attractive to wildlife.

How a vertical flow reed bed works?

F In vertical flow (downflow) reed beds, the waste water is applied on top of the reed bed, flows down through a rhizome zone with sludge as substrate, then the root zone with sand as substrate and followed by a layer of gravel for drainage, and is collected in an under drainage system of large stones. The effluent flows onto the surface of the bed and percolates slowly through the different layers into an outlet pipe, which leads to a horizontal flow bed and is cleaned by millions of bacteria, algae, fungi, and microorganisms that digest the waste, including sewage. There is no standing water so there should be no unpleasant smells.

G Vertical flow reed bed systems are much more effective than horizontal flow reed-beds not only in reducing biochemical oxygen demanded (BOD) and suspended solids (SS) levels but also in reducing ammonia levels and eliminating smells. Usually considerably smaller than horizontal flow beds, but they are capable of handling much stronger effluents which contain heavily polluted matters and have a longer lifetime value. A vertical Reed bed system works more efficiently than a horizontal reed bed system, but it requires more management, and its reed

beds are often operated for a few days then rested, so several beds and a distribution system are needed.

H There are several advantages of Reed Bed Systems over traditional forms of water treatment: first, they have low construction and running costs; second, they are easy management; third, they have an excellent reduction of biochemical oxygen demand and suspended solids; last, they have a potential for efficient removal of a wide range of pollutants.

I Reed beds are natural habitats found in floodplains, waterlogged depressions and estuaries. The natural bed systems are a biologically proved, an environmentally friendly and visually unobtrusive way of treating waste water, and have the extra virtue of frequently been better than mechanical waste water treatment systems. In the medium to long term reed bed systems are, in most cases, more cost effective in installment than any other waste water treatment. They are robust and require little maintenance. They are naturally environmentally sound protecting groundwater, dams, creeks, rivers and estuaries.

Questions 28-30

Do the following statements agree with the information given in Reading Passage 2?

In boxes 14-16 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 on this*

28 The Reed bed system is a conventional method for water treatment in urban area.

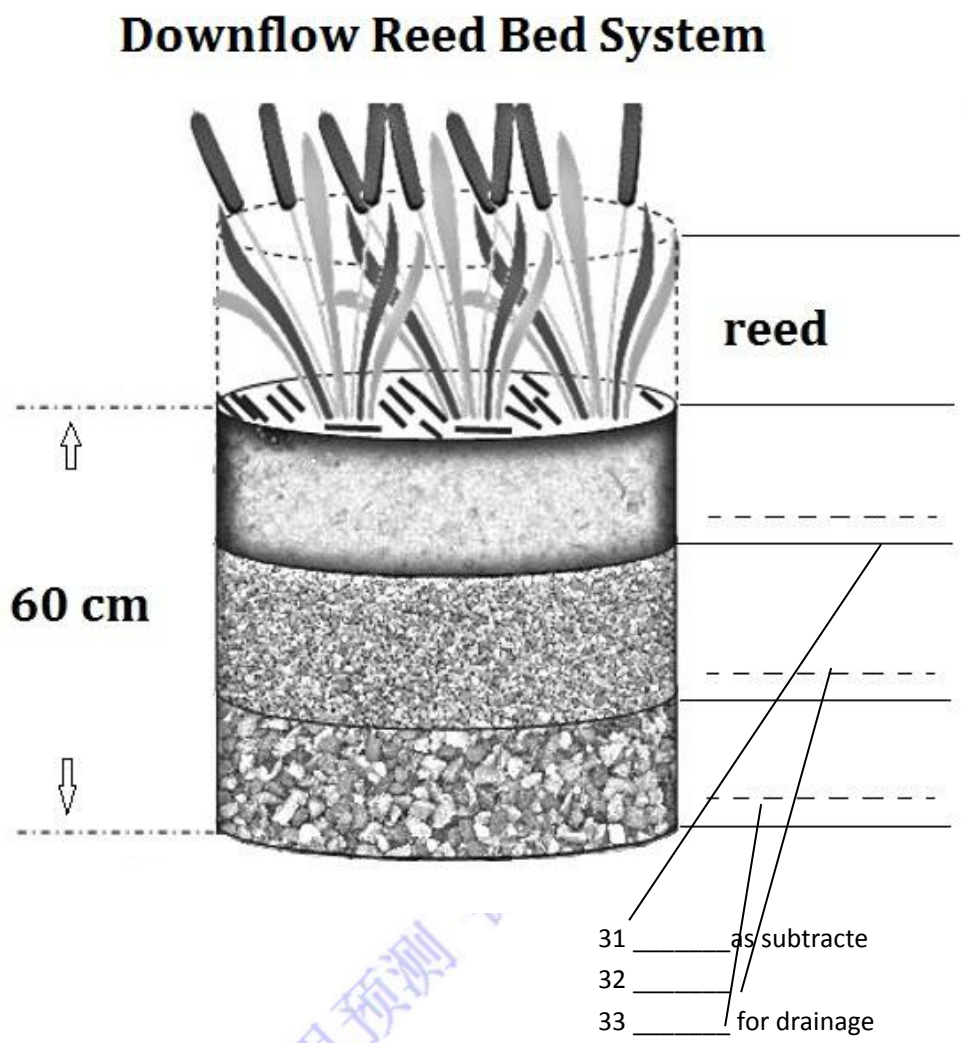
29 In the reed roots, there’s a series of process that help breakdown the pollutants.

30 Escherichia coli is the most difficult bacteria to be dismissed.

Questions 31-33

Complete the diagram below.

Choose NO MORE THAN THREE WORDS AND/OR A NUMBER from the passage for each answer.



Questions 34-38

Use the information in the passage to match the advantages and disadvantages of the two systems: horizontal flow system and down-flow system (listed A-H) below. Write the appropriate letters A-H in boxes 20-24 on your answer sheet.

34 _____, which is the advantage of the down-flow system. However, 35 _____ and 36_____are the disadvantages of the down-flow system 37 _____ and 38 _____ are the two benefits of the horizontal flow system. However it’s less effective and efficient.

A It can deal with a more seriously polluted effluent.
B It requires more beds than one compared to the other.
C It needs less control and doesn’t need to be taken care of all the time.
D It requires a lot of guidance.
E It can’t work all the time because the pool needs time to rest and recover after a certain period.
F It’s a lot more complicated to build the system.

G The system is easy to be built which does not need auxiliary system.
H It consumes less water.

Questions 39-40

Choose two correct letters, from the following A, B, C, D or E.

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

What are the two benefits of natural bed systems when compared to the conventional systems?

A Operation does not require electricity or fuel supply.

B They’ re visually good and environmental friendly.

C No mechanical systems are involved.

D They’ re to be set up and used in less cost.

E They do not break down.

FALSE	TRUE	NOT GIVEN	sludge	sand
gravel	A	B	E	C
G	A	D		