

Test 1

1

LISTENING

SECTION 1 Questions 1-10

Complete the notes below.

Write **NO MORE THAN THREE WORDS AND/OR A NUMBER** for each answer.

JOB ENQUIRY

Example

- Work at: a restaurant

- ✓ Type of work: 1
- Number of hours per week: 12 hours
- Would need work permit
- Work in the: 2 branch
- Nearest bus stop: next to 3
- Pay: 4 £ an hour
- Extra benefits:
 - a free dinner
 - extra pay when you work on 5
 - transport home when you work 6
- Qualities required:
 - 7
 - ability to 8
- Interview arranged for: Thursday 9 at 6 p.m.
- Bring the names of two referees
- Ask for: Samira 10

SECTION 2 Questions 11–20

Questions 11–16

Complete the notes below.

Write **ONE WORD AND/OR A NUMBER** for each answer.**SPORTS WORLD**

- a new **11** of an international sports goods company
- located in the shopping centre to the **12** of Bradcaster
- has sports **13** and equipment on floors 1 – 3
- can get you any item within **14** days
- shop specialises in equipment for **15**
- has a special section which just sells **16**

Test 1

3.

Questions 17 and 18

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

17 A champion athlete will be in the shop

- A on Saturday morning only.
- B all day Saturday.
- C for the whole weekend.

18 The first person to answer 20 quiz questions correctly will win

- A gym membership.
- B a video.
- C a calendar.

Questions 19 and 20

Choose **TWO** letters, **A–E**.

Which **TWO** pieces of information does the speaker give about the fitness test?

- A You need to reserve a place.
- B It is free to account holders.
- C You get advice on how to improve your health.
- D It takes place in a special clinic.
- E It is cheaper this month.

SECTION 3 Questions 21–30

Choose the correct letter, A, B or C.

Course Feedback

- 21 One reason why Spiros felt happy about his marketing presentation was that
- A he was not nervous.
 - B his style was good.
 - C the presentation was the best in his group.
- 22 What surprised Hiroko about the other students' presentations?
- A Their presentations were not interesting.
 - B They found their presentations stressful.
 - C They didn't look at the audience enough.
- 23 After she gave her presentation, Hiroko felt
- A delighted.
 - B dissatisfied.
 - C embarrassed.
- 24 How does Spiros feel about his performance in tutorials?
- A not very happy.
 - B really pleased
 - C fairly confident
- 25 Why can the other students participate so easily in discussions?
- A They are polite to each other.
 - B They agree to take turns in speaking.
 - C They know each other well.
- 26 Why is Hiroko feeling more positive about tutorials now?
- A She finds the other students' opinions more interesting.
 - B She is making more of a contribution.
 - C The tutor includes her in the discussion.
- 27 To help her understand lectures, Hiroko
- A consulted reference materials.
 - B had extra tutorials with her lecturers.
 - C borrowed lecture notes from other students.

- 28 What does Spiros think of his reading skills?
- A He reads faster than he used to.
 - B It still takes him a long time to read.
 - C He tends to struggle with new vocabulary.
- 29 What is Hiroko's subject area?
- A environmental studies
 - B health education.
 - C engineering
- 30 Hiroko thinks that in the reading classes the students should
- A learn more vocabulary.
 - B read more in their own subject areas.
 - C develop better reading strategies.

SECTION 4 Questions 31–40

Complete the notes below.

Write **NO MORE THAN TWO WORDS** for each answer.

Mass Strandings of Whales and Dolphins

Mass strandings: situations where groups of whales, dolphins, etc. swim onto the beach and die

Common in areas where the 31 can change quickly

Several other theories:

Parasites

e.g. some parasites can affect marine animals' 32, which they depend on for navigation

Toxins

Poisons from 33 or are commonly consumed by whales

e.g. Cape Cod (1988) – whales were killed by saxitoxin

Accidental Strandings

Animals may follow prey ashore, e.g. Thurston (1995)

Unlikely because the majority of animals were not 34 when they stranded

Human Activity

35 from military tests are linked to some recent strandings

The Bahamas (2000) stranding was unusual because the whales

- were all 36
- were not in a 37

Group Behaviour

- More strandings in the most 38 species of whales
- 1994 dolphin stranding – only the 39 was ill

Further Reading

Marine Mammals Ashore (Connor) – gives information about stranding 40

Test 1

LISTENING

SECTION 1 Questions 1–10

Complete the notes below.

Write **ONE WORD AND/OR A NUMBER** for each answer.

HIRING A PUBLIC ROOM

Example

- the Main Hall – seats 200

Room and cost

- the 1 Room – seats 100
- Cost of Main Hall for Saturday evening: 2 £
+ £250 deposit (3 payment is required)
- Cost includes use of tables and chairs and also 4
- Additional charge for use of the kitchen: £25

Before the event

- Will need a 5 licence
- Need to contact caretaker (Mr Evans) in advance to arrange
6

During the event

- The building is no smoking
- The band should use the 7 door at the back
- Don't touch the system that controls the volume
- For microphones, contact the caretaker

9

Listening

After the event

- Need to know the 8 for the cleaning cupboard
- The 9 must be washed and rubbish placed in black bags
- All 10 must be taken down
- Chairs and tables must be piled up

SECTION 2 **Questions 11–20**

Questions 11–14

Complete the notes below.

Write **ONE WORD** for each answer.

Fiddy Working Heritage Farm

Advice about visiting the farm

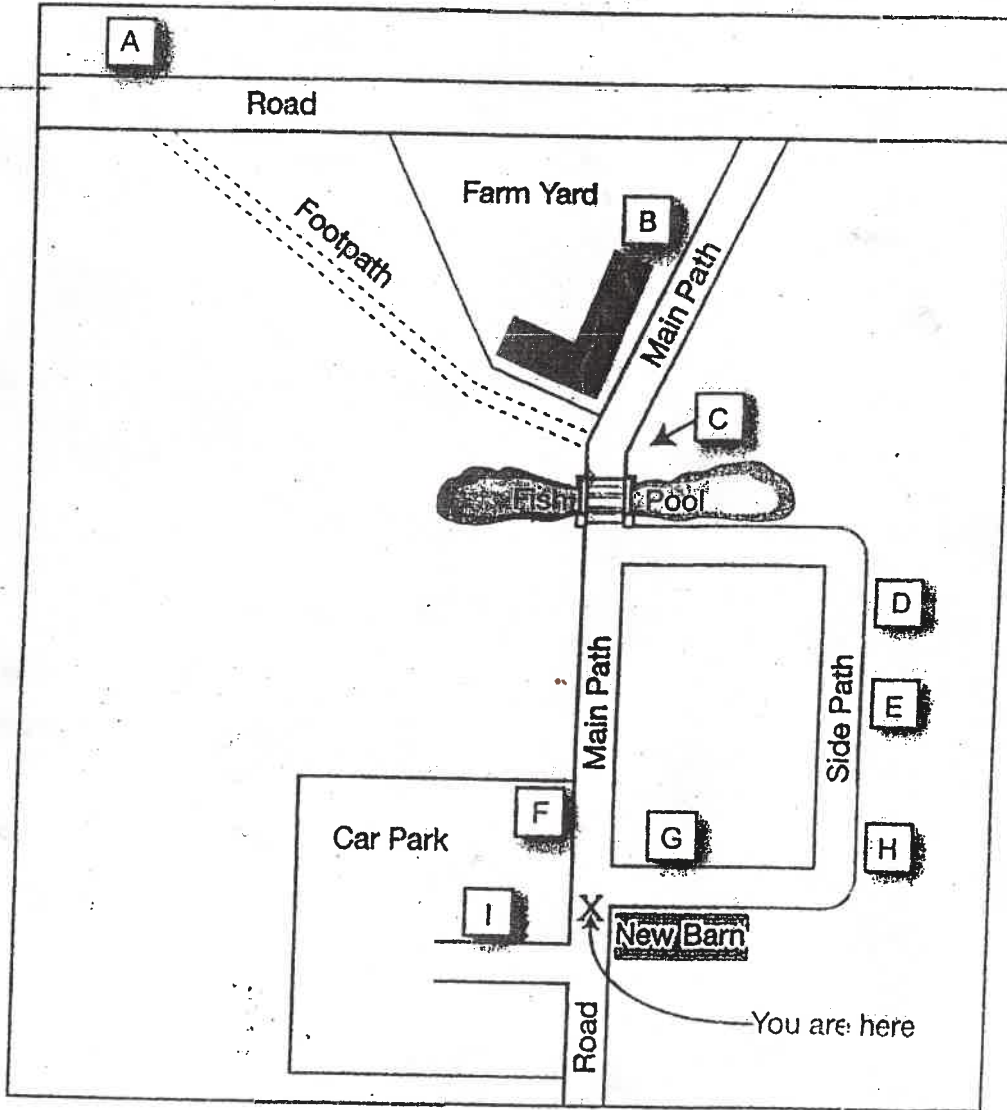
Visitors should

- take care not to harm any **11**
- not touch any **12**
- wear **13**
- not bring **14** into the farm, with certain exceptions

Questions 15–20

Label the map below.

Write the correct letter A–I, next to Questions 15–20.



- 15 Scarecrow
- 16 Maze
- 17 Café

- 18 Black Barn
- 19 Covered picnic area
- 20 Fiddy House

SECTION 3 Questions 21–30

Choose the correct letter, A, B or C.

Study on Gender in Physics

- 21 The students in Akira Miyake's study were all majoring in
- A physics.
 - B psychology or physics.
 - C science, technology, engineering or mathematics.
- 22 The aim of Miyake's study was to investigate
- A what kind of women choose to study physics.
 - B a way of improving women's performance in physics.
 - C whether fewer women than men study physics at college.
- 23 The female physics students were wrong to believe that
- A the teachers marked them in an unfair way.
 - B the male students expected them to do badly.
 - C their test results were lower than the male students'.
- 24 Miyake's team asked the students to write about
- A what they enjoyed about studying physics.
 - B the successful experiences of other people.
 - C something that was important to them personally.
- 25 What was the aim of the writing exercise done by the subjects?
- A to reduce stress
 - B to strengthen verbal ability
 - C to encourage logical thinking
- 26 What surprised the researchers about the study?
- A how few students managed to get A grades
 - B the positive impact it had on physics results for women
 - C the difference between male and female performance
- 27 Greg and Lisa think Miyake's results could have been affected by
- A the length of the writing task.
 - B the number of students who took part.
 - C the information the students were given.

13.

Listening

- 28 Greg and Lisa decide that in their own project, they will compare the effects of
- A two different writing tasks.
 - ~~B~~ a writing task with an oral task.
 - C two different oral tasks.
- 29 The main finding of Smolinsky's research was that class teamwork activities
- A were most effective when done by all-women groups.
 - ~~B~~ had no effect on the performance of men or women.
 - C improved the results of men more than of women.
- 30 What will Lisa and Greg do next?
- ~~A~~ talk to a professor
 - B observe a science class
 - C look at the science timetable

SECTION 4 Questions 31–40

Complete the notes below.

Write **ONE WORD ONLY** for each answer.

Ocean Biodiversity

Biodiversity hotspots

- areas containing many different species
- important for locating targets for 31
- at first only identified on land

Boris Worm, 2005

- identified hotspots for large ocean predators, e.g. sharks
- found that ocean hotspots:
 - were not always rich in 32
 - had higher temperatures at the 33
 - had sufficient 34 in the water

Lisa Ballance, 2007

- looked for hotspots for marine 35
- found these were all located where ocean currents meet

Census of Marine Life

- found new ocean species living:
 - under the 36
 - near volcanoes on the ocean floor

Global Marine Species Assessment

- want to list endangered ocean species, considering:
 - population size
 - geographical distribution
 - rate of 37
- Aim: to assess 20,000 species and make a distribution 38
for each one

Recommendations to retain ocean biodiversity

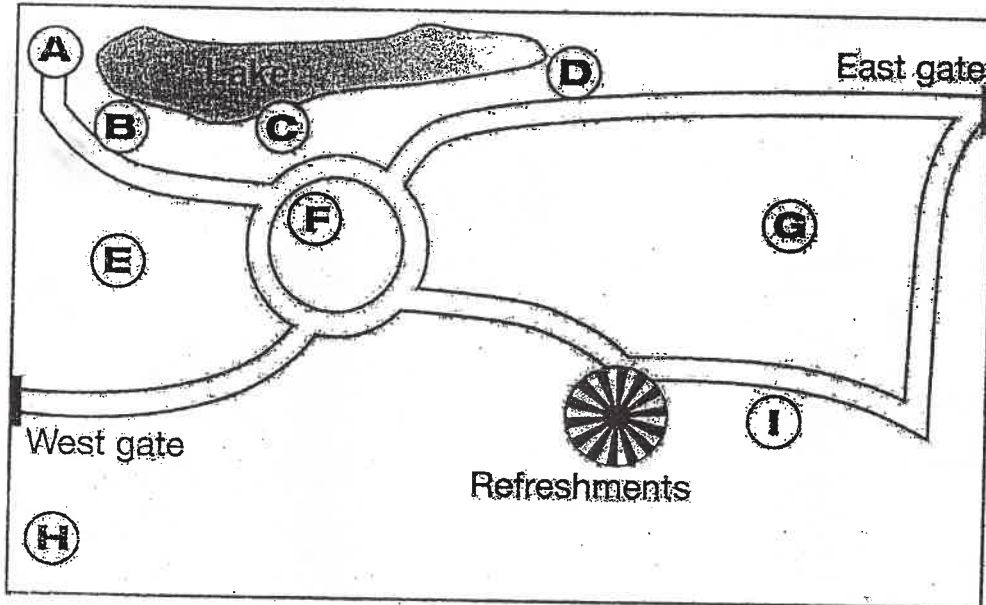
- increase the number of ocean reserves
- establish 39 corridors (e.g. for turtles)
- reduce fishing quotas
- catch fish only for the purpose of 40

Questions 17–20

Label the map below.

Write the correct letter, A–I, next to questions 17–20.

Hinchingbrooke Park



- 17 bird hide
- 18 dog-walking area
- 19 flower garden
- 20 wooded area

SECTION 2 Questions 11–20

Question 11

Choose the correct letter, A, B or C.

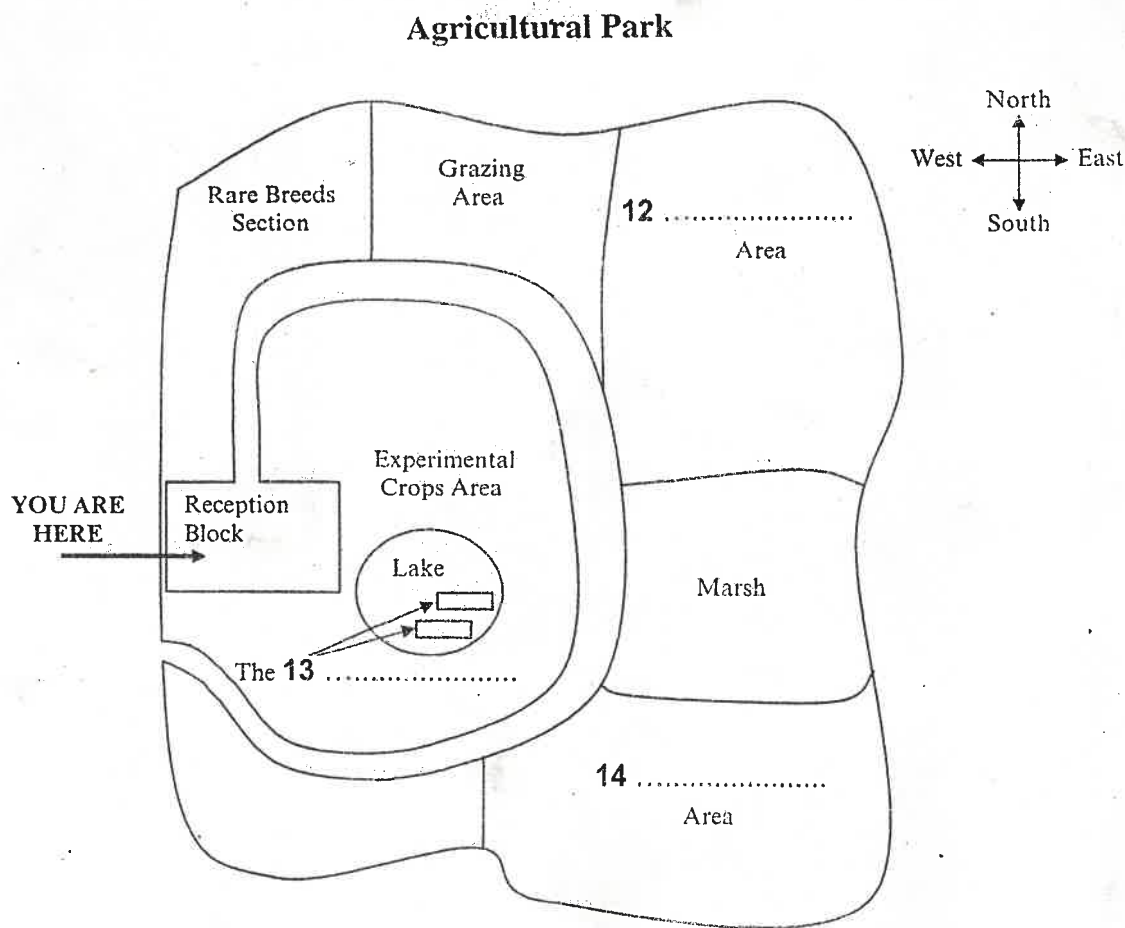
11 According to the speaker, the main purposes of the park are

- A education and entertainment.
- B research and education.
- C research and entertainment.

Questions 12–14

Label the plan below.

Write **NO MORE THAN TWO WORDS** for each answer.



Test 2

Questions 15–20

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

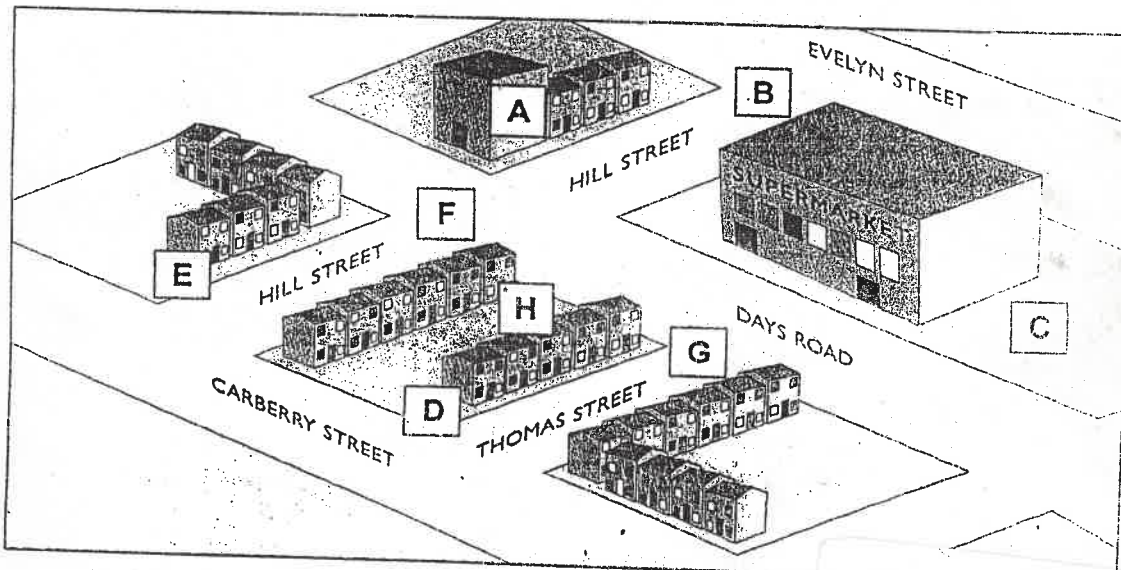
- 15 When are the experimental areas closed to the public?
- A all the year round
 - B almost all the year
 - C a short time every year
- 16 How can you move around the park?
- A by tram, walking or bicycle
 - B by solar car or bicycle
 - C by bicycle, walking or bus
- 17 The rare breed animals kept in the park include
- A hens and horses.
 - B goats and cows.
 - C goats and hens.
- 18 What is the main purpose of having the Rare Breeds Section?
- A to save unusual animals
 - B to keep a variety of breeds
 - C to educate the public
- 19 What can you see in the park at the present time?
- A the arrival of wild birds
 - B fruit tree blossom
 - C a demonstration of fishing
- 20 The shop contains books about
- A animals.
 - B local traditions.
 - C the history of the park.

Questions 14–20

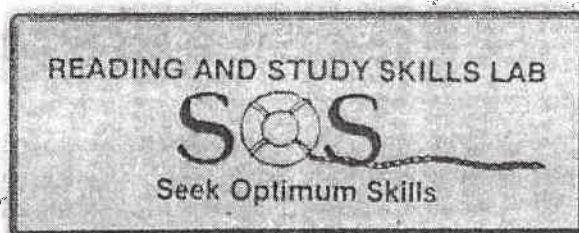
Label the map below.

Write the correct letter, A–H, next to questions 14–20.

Red Hill Improvement Plan



- 14 trees
- 15 wider footpaths
- 16 coloured road surface
- 17 new sign
- 18 traffic lights
- 19 artwork
- 20 children's playground



SKIMMING AND SCANNING

Skimming and scanning are two specific speed-reading techniques, which enable you to cover a vast amount of material very rapidly. These techniques are similar in process but different in purpose. Quickly "looking over" an article is neither skimming nor scanning. Both require specific steps to be followed.

- I. **SKIMMING** is a method of rapidly moving the eyes over text with the purpose of getting only the main ideas and a general overview of the content.
 - A. Skimming is useful in three different situations.
 - Pre-reading--Skimming is more thorough than simple previewing and can give a more accurate picture of text to be read later.
 - Reviewing--Skimming is useful for reviewing text already read.
 - Reading--Skimming is most often used for quickly reading material that, for any number of reasons, does not need more detailed attention.
 - B. Steps in skimming an article
 - Read the title--it is the shortest possible summary of the content.
 - Read the introduction or lead-in paragraph.
 - Read the first paragraph completely.
 - If there are subheadings, read each one, looking for relationships among them.
 - Read the first sentence of each remaining paragraph.
 - a. The main idea of most paragraphs appears in the first sentence.
 - b. If the author's pattern is to begin with a question or anecdote, you may find the last sentence more valuable.
 6. Dip into the text looking for:
 - a. Clue words that answer who, what, when, why, how
 - b. Proper nouns
 - c. Unusual words, especially if capitalized
 - d. Enumerations
 - e. Qualifying adjectives (best, worst, most, etc.)
 - f. Typographical cues--italics, boldface, underlining, asterisks, etc.
 7. Read the final paragraph completely.
- C. Mastering the art of skimming effectively requires that you use it as frequently as possible.
- D. Skimming can usually be accomplished at about 1000 words per minute.

Space Travel

A) People have always dreamed of leaving planet Earth and exploring outer space. Sputnik, the first artificial satellite, was launched in 1957. A human being went into space in 1961. Nowadays, aided by huge technological advancements, astronauts spend up to a year on orbiting space stations and robotic explorers have visited nearly all the planets in our solar system.

B) The first challenge of space exploration was developing rockets powerful enough to escape Earth's gravity, with guidance systems reliable enough to reach their destinations. The next was constructing lightweight, durable satellites and maintaining radio communication with them. Exceptionally high standards of reliability in manufacturing and testing are necessary and a number of product innovations in daily use are a result of attempts to solve specific logistical problems connected with life in space.

C) In addition to overcoming the challenges of no atmosphere, extremes of temperature and cosmic radiation, it was necessary to develop tools and techniques for space navigation, scientific observations and experiments and coping with incidental crises as they arose. The Apollo program, which in 1969 sent astronauts to the Moon and back, was a huge achievement watched globally by millions on (pre satellite) T.V, although some have subsequently claimed that the whole spectacle was an elaborate hoax.

D) Emphasis then shifted to maximizing efficiency and comfort during long-term stays on space stations and developing reusable spacecraft. The latter resulted in the space shuttle fleet but encountered a major setback when the U.S spaceship Challenger exploded shortly after takeoff in 1986.

E) A great advantage of putting satellites into space is the ability to look at Earth (Landsat1 went into polar orbit in 1972). Large-scale photos enable observation of land masses, oceans and weather patterns, remote regions can be mapped in detail and electromagnetic cameras return a wealth of useful data, for example infrared images which allow researchers to discriminate between healthy crops and diseased ones.

F) Objects such as stars emit electromagnetic radiation, different wavelengths of which provide scientists with various types of information about the universe. Infrared radiation reveals objects that are not hot enough to emit visible light, such as dust clouds. X rays can indicate extremely high temperatures caused by violent collisions or other events. Earth's atmosphere absorbs high-energy radiation in order for life to exist on the planet, but it also hides many celestial objects from ground-based telescopes. Satellite data has enabled the first cosmic map and discovered further evidence for the 'Big Bang' theory of the origin of the universe. The Hubble telescope, sent into orbit in 1990, provides astronomers with spectacularly detailed images of space. Satellites are used for political reasons too: the classified 'keyhole' system is reported to be able to read a car licence plate from 100 miles in orbit, while military uses include detection of missiles and nuclear weapons and the development of the Global Positioning System, extensively used for navigation.

G) The future of space exploration depends on many factors: technological evolution, political rivalries and partnerships between nations, and public attitudes to continuing costly space exploration. Human spaceflight in Earth's orbit and unpiloted spaceflight within the solar system will continue. Piloted spaceflight to other planets or any flight to other solar systems remains distant, but advances in space technology could take space exploration into the areas of contemporary science fiction. Despite all this, the Apollo astronauts claimed that their personal greatest discovery from the Moon voyages was an increased spiritual awareness of planet Earth as a small but beautiful oasis of life in an essentially empty and impersonal universe.

The Three Gorges Dam Project

A) China's Yangtze River has been the transportation lifeline of a productive region, stretching from Sichuan Province to the eastern coast, for many centuries. The Grand Canal, begun in the 5th and extended in the 7th and 14th centuries, provided links to southern and especially northern China, including Beijing. In the 19th century, Shanghai and inland settlements developed as ports of trade with connections to the West. Sun Yat-Sen first proposed a dam at Three Gorges in 1919 and Mao Tse-Tung ordered feasibility studies in the mid-1950s, after devastating floods. Work finally began in 1994, amid unprecedented dissent and controversy.

B) There are thousands of dams in the Yangtze Basin meeting the high regional demand for irrigation and electricity, but only two of them (the Three Gorges and Gezhou) are on the river itself. The Three Gorges Dam is at Sanduping, near Yichang. Completion is expected in 2009, with an estimated 250,000 workers currently involved in the project. It will measure more than 200 m (600 ft) high and 1.6 km (1 mile) long, will create a reservoir 650 km (400 miles) long and will generate over 18,000 megawatts of electricity, making it larger and more productive than any other hydroelectric facility. The dam is also designed to control flooding, which has claimed more than 1 million lives in the past 100 years, and to improve navigation upriver. Officials hope the combination of inexpensive electricity and cheap river transportation will encourage international investment.

C) Nevertheless, the project has drawn intense criticism, both national and international.

Firstly, widespread allegations of corruption among officials involved with the project have raised fears of shoddy construction. In 1999, Premier Zhu Rongji warned those involved that their responsibility was "heavier than a mountain" and continued; "Any carelessness or negligence will bring disaster to our future generations and cause irretrievable losses". In 2000, 53 engineers and academics petitioned President Jiang Zemin to delay full filling of the reservoir and relocating the local population until scientists could determine whether the reservoir was viable given the various problems. But construction continued, as did scandals including bribery, embezzlement of funds, nepotism and job selling.

D) Secondly, the project is thought to have cost more than any other single construction project in history, with estimates of over US\$75 billion. Supporters claimed that the plan is within its US\$25 billion budget and that the project would pay for itself through electricity generation. They further argued that demand would rise once a new national transmission grid is in place. But opponents believe that by the time demand has increased, competition from cheaper, superior alternatives will have won the ratepayers, unless they are forced to buy the Three Gorges power, or unless the government subsidizes the power. Critics also worry that other projects in need of investment will suffer as China concentrates all its financial resources on the project. Experts believe that the project faces a shortage of funds, especially since many foreign financiers and governments, with some notable exceptions, have considered the dam too risky to get involved.

E) Thirdly, the new reservoir will inundate many towns and cities, displacing between 1 and 2 million people. The lands they have been offered in compensation for ancestral lands is less fertile than those lost and may require use of unfamiliar farming methods. Corruption and poor construction have delayed new housing or resulted in sub-standard buildings. Journalist and engineer Dai Qing, who was jailed for criticizing the Three Gorges project, calls it "the most environmentally and socially destructive project in the world."

F) Archaeologists and historians have estimated nearly 1,300 important sites will be submerged, destroying cultural remnants up to 4000 years old. In addition, tourism associated with the Three Gorges as a physical and cultural attraction may come to an end.

G) Finally, but perhaps most importantly, many leading scientists predict the Three Gorges Dam represents an environmental disaster on many levels. Little or no attempt has been made to remove toxic materials and other pollutants from inundated industrial sites, thus creating a huge potential health hazard. The relative lack of waste treatment plants in China also could mean run-off from communities around the dam would go untreated directly into the reservoir. The dam may erode the fragile upper slopes of the gorges. As a result, sediment may accumulate as well as industrial pollutants, leading to increased silting of its mouth and pollution of the delta. The project will necessitate extensive logging in the area and may erode much of the coastline. Wildlife experts believe that many life forms will suffer, including species of fish, waterfowl and that the endangered Chinese river dolphin, of which fewer than 100 individuals remain, will become extinct because the dam's construction will destroy its present habitat.

H) Despite the dissenting voices, construction continues and the consensus is that China's leaders have too great a political investment in the dam's completion to ever contemplate backing away from the project.

June 4: the great divide remains

- A) The pro-reform political demonstrations in Tiananmen Square, Beijing, on June 4th 1989 and the subsequent government crackdown have been described by Amnesty International as "the massacre of hundreds of unarmed civilians... and the subsequent injuries and arrest of tens of thousands of demonstrators throughout China". 70,000 Hong Kong people joined the 10th anniversary candlelit vigil at Victoria Park and an estimated 50,000 turned up in 2003, to commemorate the victims and show solidarity with those still pressing for reform within and outside China.
- B) Not everyone thinks that the Government were entirely in the wrong however. It takes a pointed question to get mainland political economist Wang Xiaodong to talk about the events of June 4. But once he starts there is little doubt in his mind that 1989 was not the time for the sweeping political changes being pushed by reformers. "In looking at the past 14 years, it's clear the nation made the right decision on focusing on economic reforms," says Mr Wang. "Clearly, we have seen positive results."
- C) An author of half a dozen books on China's global strategy, and famous for his right-wing nationalist views, Mr Wang believes the evidence that the right choices were made is clear for all to see. "In the 1990s foreign direct investment flowed into China and our economy grew rapidly. Most important of all, many Chinese today enjoy a substantially higher standard of living."
- D) Mr Wang is not an apologist for the Communist Party or a defender of the status quo. He says that while 1989 was not a time for initiating political reforms, 2003 is another matter. "We've enjoyed solid economic growth, but we must use this ideal opportunity of a strong stable economy to initiate political reforms today. We should not wait for the economy to turn bad and be forced to initiate them later. The price you pay then will be huge."
- E) Mr Wang, 48, is one of the more influential thinkers among mainland intellectuals. He is seen as one of a generation of scholars who came to embrace the party line after the June 4 crackdown - the timing, that is, rather than the cause. "In the coming three to five years, China won't have any major problems, but it is harder to say in the longer term," he says. "We in China owe a debt in the form of political reforms. We haven't paid this yet."
- F) He says Russia and its communist satellites in Eastern Europe took the leap of converting quickly to democratic rule and capitalism in the late 1980s and early 1990s, but they paid a heavy price. It was only after more than a decade of economic decline and turmoil that these countries have started to find an economic footing. "In the coming three to five years, China won't have any major problems, but, as history tells us, high economic growth isn't sustainable." Mr Wang believes that China is finally rich enough, with US\$286 billion in foreign exchange reserves, to take on the challenge of such reforms.
- G) Rather than delay political reforms any longer, he argues that the fourth generation of leaders should push through with them in the coming five to 10 years. "To ensure that our political transformation will be smooth, we in China must make the changes when our society and economics are in good condition," he says. "Only when the times are good can we afford to pay a relatively affordable price for political change. We shouldn't wait for the economy to slow down and turn bad." A sound economy is dependant on a law-abiding political system, Mr Wang maintains, and that means the party must increase transparency, crack down on corruption, and invite the public to be its watchdog. "Private enterprises now make up one-third of our gross domestic product," says Mr Wang. "Many Chinese entrepreneurs aren't willing to make long-term investments because there are still so many political uncertainties ahead."
- H) Key among China's challenges is its global positioning. Though the nation is increasingly driven by market economics, its policies are still decided by an undemocratic political process in an increasingly global world that demands transparency. The lack of transparency perpetuates official corruption, which saps economic growth in the longer term. "Sure, China grew in the 1980s and 1990s because we delayed political reforms," says Mr Wang. "But it is time for us to grasp the timing and accelerate political reforms now. China is rich and the price we have to pay may be comparatively less. Let's not lose this opportunity."

Mammals

A) A mammal is an animal that gives birth to live young and feeds them on milk. It is warm blooded, with specialised features distinguishing it from other animals, such as middle ear bones allowing good hearing and jaws with teeth to cut, chew or grind food, allowing most efficient digestion of nutrients and calories. Mammal embryos in the uterus are initially protected from rejection by the mother's immune system and subsequently nourished by a placenta, which means they can stay in the womb long enough to develop specialised features such as flippers or wings and are generally born fully formed. The mother-child bond is strong and young animals learn by copying adult behaviour.

B) The range of mammals is wide, including marsupials, rodents, predators, large plant eaters, aquatic mammals and primates. Each species' physiology is highly adapted to its environment and lifestyle. Mammals also have large brains and highly developed nervous systems, enabling more intelligence and resourcefulness than other animals, a key survival feature. Learned behavior is passed on from one generation to another, so younger generations benefit from their ancestors' experience. This was vital to human evolution and flexible adaptation and problem solving skills are still an exceptional feature of our species.

C) The earliest true mammals, appearing over 200 million years ago, were small shrew-like tree dwellers. Mammal lineages developed to some extent until the demise of the dinosaurs, around 65 million years ago, after the cataclysmic collision of a meteor 6 miles across into what is now the Yucatan desert caused dramatic changes in climate and conditions worldwide. Fossil evidence shows that, once they could exploit Earth's resources freely, mammals diversified enormously. There are now around 4600 species of mammals, in all continents. Most live on land and move about on four legs but some are aquatic (e.g the whale) and some fly (e.g a Thai forest bat the size of a bee).

D) The separation and (in some places) the reformation of land masses resulted in groups of species evolving on their own for many millions of years. Some eventually succumbed to environmental changes, geographic events or other animals; other more successful types flourished and adapted to become even more successful, perhaps also migrating to another areas.

E) Variations in size and specialisations are enormous. Lifespan ranges from less than a year (shrews) to a century (humans). Habitats range from the arctic, with temperatures of minus 68° C (polar bears, foxes), to deserts of up to 50 C (camels, kangaroo rats). Yaks graze on 6000m high altitude plateaux; sperm whales dive to 2000m underwater; grassland ruminants graze in herds and use speed and numbers to escape predators, forest mammals are usually solo, nocturnal and often camouflaged. Desert mammals have kidney functions adapted to retaining water; high altitude animals carry extra red blood cells to maximise oxygen capacity.

F) Recent advances in genetic science and improved technological tools have led to some controversy in the evolutionary theories of mammals. In the 1960s, evidence emerged to indicate that originally, earth had one single land mass, now called Pangaea. This split into two about 225 million years ago, with each 'continent' carrying certain evolving species. Fossil finds indicated that mammals evolved in the northern land mass and later migrated south over land bridges that formed at various times. However, more recent finds in the south have found evidence of advanced mammals from a much earlier period than in the north, turning the 'north to south' model upside down. Additionally, geneticists can now compare fossil DNA with the genes of living mammals. They are finding that our classification of different groups of mammals is not accurate; that hippos and whales for example are not distant but very close relatives. Humans share around 95% of their genetic material with chimpanzees.

G) All mammals have four-chambered hearts, a muscular diaphragm separating their heart and lungs from their abdominal cavities, a lower jaw made of a single bone, and the same arrangement of tiny bones in the inner ears. Almost all mammals, including whales, mice, and giraffes, have seven vertebrae in their necks. The arms of humans, the flippers of seals, and the wings of bats all have the same number and arrangement of bones.

Divided opinions over genetically modified crops and foods

A) Europeans tend to be skeptical about the consumption of genetically modified foods and there is strong consumer pressure, supported by the Green parties, to ban farmers from growing GM crops in the European Economic Community (EEC). However 5.5 million farmers worldwide, mainly in the US, Argentina, Canada and China, now grow GM crops covering more than 50 million hectares, an area the size of Spain. Other Asian countries such as India are enthusiastic and Indonesia is about to join the GM club, so despite the Europeans, GM crop growth is increasing globally.

B) A recent British scientists' report emphasizes that inserting genes into plants is still a very inexact science, so unexpected biochemical side effects are possible, affecting foodstuffs and human consumers. Legally, GM companies have to demonstrate that their crops are "substantially equivalent" to the originals, but what does this mean? That they should contain the same nutrients? That they should look and smell similar? Scientists who not long ago dismissed public concerns as hysteria are now concurring with green consumer activists and advising tougher regulation.

C) More consensus and definition is required on this controversial topic. Currently, it seems that most American consumers trust GM food producers and associated big businesses, whilst Europeans do not. Canadians are skeptical: their studies of cross pollinated "super strains" indicate problems such as potential super viruses. Dutch studies however, suggest that engineered sugar beet is friendlier to wildlife and less damaging to the environment: it needs less herbicide for the same yield, allowing more weed biomass and increased insects and spiders, which in turn feed increased birdlife. These results are significant, as European law states that GM crops may be banned if they can be proved to damage the environment.

D) Attitudes to GM crops appear to depend on where one lives and what one does. Cotton farmers in South Africa are very enthusiastic, as their first GM cotton crop has proved extremely successful, boosting yields by 50 - 90%. "Bt cotton" contains a gene for a bacterial toxin that kills their major pest, bollworms and reduces the need for pesticides. Growing GM cotton requires less labour time, an important factor in a region ravaged by HIV/AIDS. Bt cotton seed yield shows increases of up to 129%; unsurprisingly, use grew from only 0.1 per cent of farmers in 1997/98 to over 90 per cent by 2001/02. Opponents of GM crops claim that pests will develop resistance soon and that small farmers relying completely on the modified strain are particularly vulnerable to changes in market conditions.

E) India is also pleased with its high relative yields of GM cotton and generally, yield increases in the developing world are turning out to be much higher than those of the 'first' world. It is understandable therefore, that developing countries are keen to embrace GM foods and farming methods, whilst many western farmers and consumers remain skeptical.

F) Meanwhile, in Hong Kong, the government's leaflet, 'GM Food Newsletter', is annoying consumer activists and environmentalists. In the leaflet, a university biotechnology student explains to her mother that all GM foods are safety-assessed and are "as safe as their conventional counterparts". The Food and Environmental Hygiene Department says it was published "with a view to enhancing the knowledge of the public on GM food".

G) Greenpeace call it "blatant pro-GM food propaganda" however, and claim "The government is pushing GM food safety whilst at the same time understating the potential risks". It adds the government's role is "to educate and inform the public, not to blatantly promote what is an unproven technology." Greenpeace do not believe that a reasonable system of pre-market safety assessments exists in Hong Kong and have been actively campaigning for the compulsory labelling of GM ingredients. The government argues that assessment is adequate enough to allay public fears and that labelling of GM foods should be voluntary.

H) Park'n'Shop and Wellcome allow distribution of the GM newsletter, but a spokeswoman said this did not necessarily imply active approval of GM foods, adding they had previously helped the government deliver a series of education leaflets, posters and information on SARS and dengue fever. "Our policy on GM food is neutral" she said.

PUBLIC SERVICES: A summary report for the public

A) **Education:** Current numbers of schools for kindergarten, primary and secondary students are proving adequate for student numbers. There are also vocational colleges and Adult education courses which enable those over 16 years of age to train for a trade or specific job skill or continue a lifelong upgrade of education or skills. Several universities offer a wide variety of undergraduate and postgraduate courses and a teacher training college ensures the quota of teachers remains good. In the coming year, grants for computer facilities and support for school leavers in the form of a career counseling service are priorities.

B) **Social services:** The government considers the welfare, care and protection of children, the elderly and the vulnerable, to be extremely important. This year, a new day centre to cater for those with physical or mental disabilities will be opened. In addition, a network of family 'drop-in' centres with trained counseling staff will be piloted in key areas. Over \$3 million has been earmarked for these projects.

C) **Highways and town planning:** Attention will be given to improving and maintaining roads, bridges, street lighting, the co-ordination of public transport, traffic management schemes and overall planning for the region. The overground train line is being extensively extended and will hopefully be completed by 2007.

D) **Emergency services:** We are delighted to report that, due to increased efficiency in the computer system, there is a definite improvement in the length of response time for both fire and ambulance services to 999 calls. The past 6 months have also seen a reduction in the number of hoax calls on the 999 line. The older model of fire engine is being systematically replaced by the latest model.

E) **Libraries:** Despite some opposition at Council level, more library staff have been recruited over the last 12 months and the new Central Library is now open to the public.

Be like Spiderman with new Gecko Tape

A) Most of us are familiar with Marvel comic's superhero Spiderman and his ability to walk up and down the walls of buildings, or even cross ceilings. Now a team of Anglo-Russian researchers, working mainly from the University of Manchester in the U.K, have come up with what could be a dream for children and a nightmare for their parents: "gecko" tape, which copies the incredible stickiness of a gecko lizard's feet and could allow people to climb, superhero-style, on ceilings and walls.

B) Geckos can dangle their whole body weight from a wall by one single toe. They can move themselves up a sheet of glass at the amazing speed of one metre per second. A team of U.S. biologists and engineers released a study last summer which explained how this is possible. The soles of the gecko's feet are coated with millions of microscopic hairs, or setae. Each seta has 1,000 tiny pads on its tip, a tip that is so small it is below the wavelength of visible light, only 200 billionths of a metre wide. Each seta creates a tiny force of electrodynamic attraction when it comes into contact with a surface (this kind of force of attraction and repulsion existing between molecules was discovered over 100 years ago by Johannes Van der Waals). When all the setae on a gecko's feet make contact, the combined adhesive force is incredibly strong, with the added benefit that its feet can be peeled away from the surface at any time to allow it to move one leg at a time. It seems to be the size and shape of the foot hairs that enable adherence to a surface, not their actual structure.

C) The same principle has been used in Manchester to make self-cleaning, re-attachable dry adhesive tape. If used to cover a person's hands, it would easily be sticky enough to support their full weight. The research team believes it won't be long before 'Spiderman' gloves become a reality. A biology professor at the University of California said that the uses for such a product would be "almost unlimited": as well as being an extraordinary general adhesive, it can be used to move computer chips in a vacuum, pick up small fibres and make specialised bandages. "It's like Velcro without the need for 2 sides," he said.

D) Gecko-glue has even interested the U.S. military. The central research and development organization for the Pentagon has funded some research, though it has not revealed any plans it might have for it.

MULTIPLE CHOICE - 1SPACE TRAVEL

Question 1 -3

1. In the history of space exploration, people have already.....
 - A. Built the first lunar constructions.
 - B. Lived and worked off earth for several months or more.
 - C. Landed on most of the planets on our solar system.
 - D. Left the solar system to probe other galaxies.
2. To date, satellites are NOT used for
 - A. Seeding clouds to enable rainfall in desert areas.
 - B. Determining the exact navigational location of shipping.
 - C. Tracking typhoons and other extreme weather conditions.
 - D. Detecting electromagnetic radiation
3. The Apollo astronauts feelings on viewing the earth from space were that....
 - A. we need to co-operate more politically to ensure progress with space travel
 - B. science fiction had pictured it correctly.
 - C. we inhabit a fragile and miraculous planet in a huge void.
 - D. it didn't look as spectacular as Mars

Three Gorges Dam Project

Read the passage and choose the right option from the multiple choice.

1. The main functions of the dams in the Yangtze basin are
 - A. To reroute the Yangtze river and link the region with the north and south.
 - B. To provide water for crops and electric power for homes and industries in the area.
 - C. To provide water for crops and to limit damage caused by excess rain.
 - D. To provide drinking and washing water for the dense population of the area.
2. Scandals connected to the project include....
 - A. Kidnapping, seduction and stealing project money.
 - B. Stealing project money, giving jobs to friends or relatives and paying for favours.
 - C. Seduction, stealing project money and giving jobs to friends or relatives.
 - D. Kidnapping, stealing project money and giving jobs to friends or relatives.
3. Supporter of the project claim that...
 - A. It has not cost more than expected but demand may be limited in future due to competition
 - B. It has cost more than expected and that demand may be limited in future due to competition
 - C. It has not cost more than expected and that demand for its electricity will increase in future
 - D. It has cost more than expected but future demand will more than compensate for extra expense

June 4: the great divide remains

Question 1-4

1. Political economist Wang Xiaodong thinks the past 14 years have shown that....
 - A. The government should have been stricter at the time.
 - B. The subsequent political reforms have been effective.
 - C. The Tiananmen square protesters should have demonstrated sooner.
 - D. The government was wise to concentrate on economic reforms.

2. The reason he gives for this opinion are....
 - A. Communism is the best way to future prosperity.
 - B. A higher standard of living has led to increased foreign investment.
 - C. Incoming funds from abroad improved Chinas economic situation and increased prosperity.
 - D. State investment in nationalized industry has led to an increase in prosperity.

3. Now here commends that the Chinese government should....
 - A. Push through the necessary reforms in the next 3 to 5 years.
 - B. Not instigate any changes until the next decade
 - C. Capitalize on the current economic climate to begin political reforms.
 - D. Follow the example of the Eastern European states reforms, despite the inevitable upheavals.

4. In Wang Xiaodongs opinion, the most important political reforms would be to....
 - A. Discourage the tendency towards a global market economy.
 - B. Make the government policies and processes easier for the public to follow.
 - C. Send corrupt officials to work in outlying areas.
 - D. Increase the standard of living of every Chinese person.

COMPLETING SENTENCES - 2

Mammals

1. Offspring learn how to behave by
2. Teeth such as molars, incisors and canines mean maximum benefit from absorption of
3. Our earliest mammalian ancestors were little
4. Large grazing mammals avoid being eaten by using
5. Human arms, seal and dolphin flippers and bat wings all have the same

Space travel

1. The majority of planets in our solar system have already been investigated by
2. Once a spaceship has left the orbit of the earth, it is navigated to its destination by computer controlled
3. The need of spacecrafts to transport people and goods back and forth from earth led to the development of the
4. Aplethora of information about planets and stars can be discovered using the various wavelengths of
5. Satellites permit terrestrial navigators to benefit from the extreme precise

The three gorges dam project

1. The main function of dams in the Yangtze basin are4a is to furnish local industries with
2. Subsidiary function of the Three Gorges dam will be to prevent the surroundings area being inundated and
3. A water-based transport system and a power supply which are both affordable should hopefully attract
4. One critic of the Three Gorges dam is that, if huge sums of money are spent on this project, other
5. Villagers forcibly moved to enable the project to continued are experienced housing problems because of different agricultural methods and delayed or below standards housing due to

WRITING SHORT ANSWERS -- 3

June 4: the great divide remains Read the passage and given short answers for the following question 1-6.

1. What was held in Victoria Park, Hong Kong, on the 10th anniversary of the Tiananmen Square incident?
2. What is Wang Xiaodong's profession?
3. According to Mr. Wang, China was able to develop in the 1990s by using what means?
4. How does Mr. Wang describe the Chinese economy in 2003?
5. Mr. Wang thinks Chinese political leaders should implement what in the coming five to ten years?
6. According to Mr. Wang, over 30% of China's GDP is generated by what kind of business?

Did human pheromone use die with colour vision?

Read the passage and give short answers for the following questions 1-5

1. According to geneticist Mr. Zhang, what has color vision replaced or made redundant in humans?
2. What is the name for an active gene?
3. How many years ago (approximately) did color vision develop in old world primates?
4. In what chromosome were the red and green color vision genes originally found, enabling some monkeys to develop color vision sooner than others?
5. What criteria for choosing a mate are mentioned, other than appearance?

Divided opinions over genetically modified crops and foods

Read the passage and give short answers for the following questions 1-7.

1. Which 4 countries grow the most genetically modified foodstuffs?
2. What does the British scientists report claim is possible when plants are genetically modified?
3. What are scientists advising now, in the light of public concern?
4. Which foodstuff have Dutch studies found to be wildlife friendly?
5. What are the main pest affecting South African cotton farmer's crops?
6. In Hong Kong, the government has produced an information sheet about GM crops, but which groups of people feel it is biased?
7. Park 'n' shop and Welcome have previously allowed distribution of information about which two diseases?

MATCHING HEADINGS - 4

The three gorges dam project Read the passage and select the suitable heading to each paragraph

PARAGRAPHS	ANSWERS
Paragraph A
Paragraph B
Paragraph C
Paragraph D
Paragraph E
Paragraph F
Paragraph G
Paragraph H

1. Environmental implications
2. the need for alternative energy sources
3. budget difficulties and dissention
4. social and demographic factors
5. historical and cultural factors
6. purpose and dimension of the project
7. production and construction problems
8. conclusion
9. the cultural revolution and the role of communism
10. background to the project

DIVIDED OPINIONS OVER GENETICALLY MODIFIED CROPS AND FOODS

Read the passage and select the suitable heading to each paragraph

Paragraphs	Answers	List of headings
1. paragraph A	A. Controversial studies and legal implications 1
2. paragraph B	B. reactions to GM cotton 2
3. paragraph C	C. Supermarkets' policy 3
4. paragraph D	D. differing yields in developing and 'first' worlds. 4
5. paragraph E	E. Environmentalists' reaction 5
6. paragraph F	F. Attitudes worldwide to GM foods. 6
7. paragraph G	G. Report findings change scientists attitude from confidence to caution 7
8. paragraph H	H. Hong Kong governments marketing of GM foods 8

SPACE TRAVEL

Read the passage and select the suitable heading to each paragraph

Paragraphs	Answers	Headings
Paragraph A	1. the future and the spiritual
Paragraph B	2. Man on the moon
Paragraph C	3. more satellite uses
Paragraph D	4. development and production challenges
Paragraph E	5. space shuttle
Paragraph F	6. from sputnik to now
Paragraph G	7. earth watching

COMPLETING TABLES, CHARTS OR DIAGRAMS - 5

The three gorges dam project

Read the following passage and complete the given table, chart or diagram

Issues	Criticism	Defence
Cost 1	The dam is within budget
Cost 2	Clients will choose cheaper power sources when they become available	Updating the transmission grid will increase demand for its electricity.
Cost 3	Investment will not be recoverable
Environment 1	Hydroelectric power is cleaner than coal burning and safer than nuclear plants.
Environment 2	The coastline may be eroded and logging will increase, eroding upper slopes	Steps will be taken to minimize the effects of erosion and deforestation
Environment 3	Steps will be taken to protect endangered species.
Culture	The reservoir will flood many historical sites	Many historical relics are being moved.
Natural beauty	The scenery and tourist industry will not change that much.

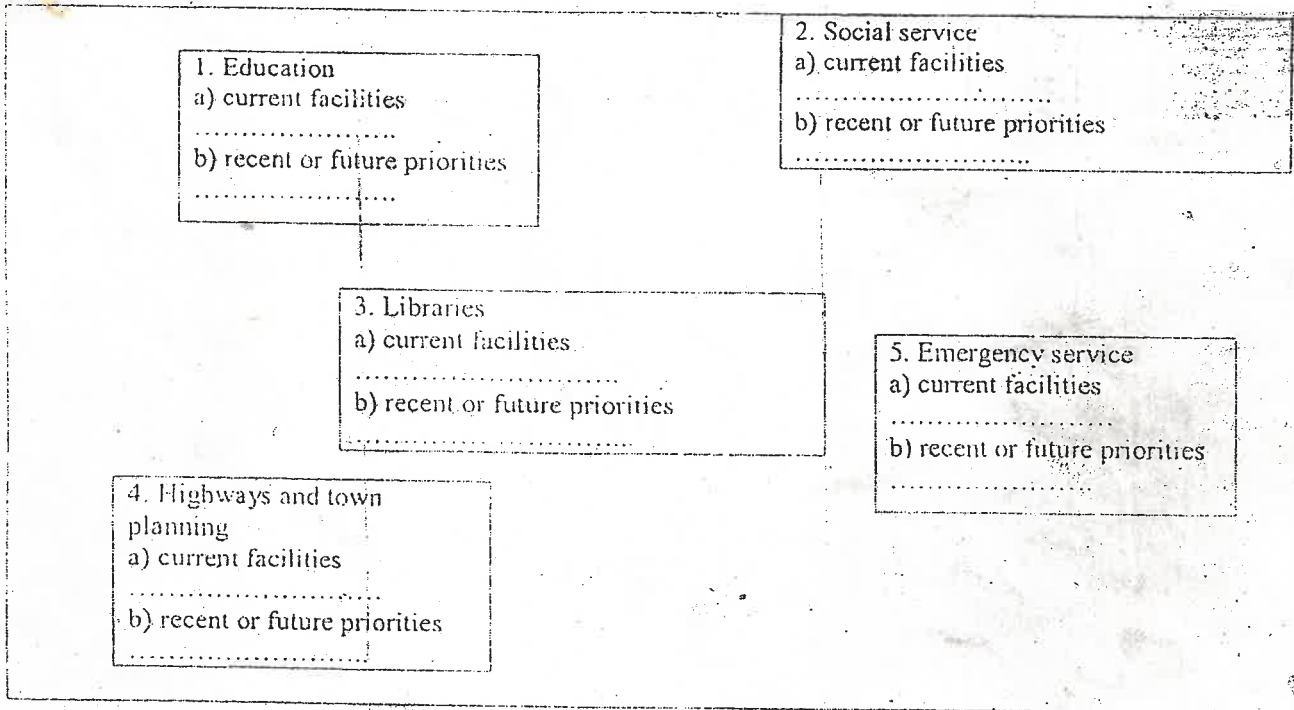
MAMMALS

Read the passage and complete the given table, chart or diagram

1. Definition of a mammal:
2. distinctive features of all mammals
3. Subgroups of the mammal family
4. Exceptional skill of the human species:

5. The earliest true mammals, appeared over Million years ago and there are around Species. Humans share around % of their genetic material with chimpanzees.
6. Physical attributes that all mammals have: (a) (b) (c)

PUBLIC SERVICES: A summary report for the public
 Read the passage and complete the given table, chart or diagram



MATCHING CAUSES AND EFFECTS - 6

Mammals

Read the passage and match the suitable effect for the following causes.

Causes	Answers	Effects
1. mammals are protected and fed by the placenta in the womb...	A. ... species can benefit from accumulated and ongoing experience and adoption.
2. their large brain and complex nervous system...	B. ... climate changes which prevented them from expanding across oceans to other continents.
3. because behavior patterns are learned and handed down through generations...	C. ... have made them intelligent enough to develop intricate language and communication systems
4. the sudden extinction of the dinosaurs meant that	D. ... some exhibited behavior is very localized and eccentric.
5. species developed in relative isolation and therefore adapted to specific habitats as a result of	E. ... the separation of land masses, each with its own 'cargo' of animals which continued to evolve to best exploit its.
		F. ... so their mother carries her babies in a pocket or pouch after birth until they get used to the outside world
		G. ... mammals had a larger share of global resources and

	<p>flourished as a result.</p> <p>H. ... there was a proliferation of vegetation and tree mammals and large plant eaters diversified rapidly.</p> <p>I. ... so they can stay there long enough to develop more specialized features than other vertebrates.</p> <p>J. ... enable flexible and resourceful adoption to external events, which increases chances of survival.</p>
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June 4: the great divide remains

Causes	Answer	Effects
1. Mr. Wang thinks the Chinese government was right to resist political reforms and concentrate on economic reforms in 1989 because...	A. it is not the time for the sweeping political changes being pushed by reformers.
2. foreign companies started to invest in China in the 1990s and as a result	B. some entrepreneurs are still reluctant to invest in long-term projects.
3. because China currently enjoying a strong and relatively stable economy and society,	C. there have been very positive economic results in the last 14 years.
4. implementing the change to an effective, legal political system is possible when things are going well and necessary for...	D. the economy expanded dramatically
5. because the political future is still unclear and uncertain,	E. the necessary political reforms should be implemented within the next decade.
		F. but, as history tell us high economic growth isn't sustainable.
		G. economic stability and future growth

The three gorges dam project

Causes	Answers	Effects
1. because of Chinas YangtZe river,	A. all factors contributing to an enormous amount of controversy and criticism, at home and abroad.
2. the area demands a high level of power and agriculture water and as a result,	B. trade and transport has been possible over a wide area for hundreds of years.
3. the Chinese government hopes that its huge scale...	C. there many dams already in existence.
4. however, cost, corruption, dubious construction practices, inundation of villages and ancient sites and environmental degradation are...	D. the project faces a shortage of funds
5. however, since the government would lose all credulity if the project were to be aborted,	E. 53 engineers and academics petitioned president Jiang Zemin to delay completion of the reservoir and the relocation of the local population.
		F. the building continues and the protesters are powerless.
		G. will enable it to produce more power than any other hydroelectric construction, control flooding and attract investment to the region.

COMPLETING A SUMMARY - 7The three gorges dam project

Read the passage and complete the summary with proper words from given options

The biggest dam and 1. ever constructed, called the Three Gorges Project, is being 2. On the Yangtze river, despite controversy and criticism. Project 3. main justification is the 4. amount of power it will generate, to be sent through transmission lines mostly to eastern and central china to solve energy shortage there, where economic development is being held back; they also 5. flooding will be 5. and regional business 6. Increased. However, environmentalists protest potential disaster, human rights advocated 7. The resettlement plan and archeologists and historians object to the submergence of a huge number of 8. Sites. Many mourn the loss of some of the world's finest scenery. Despite this protest. The project is due for completion in 2009.

Choose the proper words from given options.

- | | | | | | | |
|--------------|-----------|---------------|---------------|---------------|---------------|---------------|
| a) corrupted | b) hugely | c) massive | d) controlled | e) enemies | f) investment | g) supporters |
| h) built. | i) sewage | k) exacerbate | l) reservoirs | m) historical | n) criticize | |

Space travel Complete the following summary with proper words from given options.

1. the first space explorers had to overcome the problems of ...
- living in vacuum
 - inability to move around in their spacesuits.
 - dealing with unprecedented degrees of external heat and cold.
 - exposure to harmful cosmic rays.
 - dealing with increased gravitational pull
 - maintaining body temperature within the space.
 - suffering a buildup of carbon monoxide similar to divers "berfids".
 - being hit by meteorites

2. the future of space exploration is dependent on ...
- a global policy of nuclear non-proliferation
 - co-operation between countries interested in developments in space.
 - the global expansion of science fiction
 - the general consensus of taxpayers that space exploration is valuable.
 - appropriate recruitment of volunteer personnel
 - continuing technological advances.
 - annihilation of terrestrial weapons of mass destruction.

DIVIDED OPINIONS OVER GENETICALLY MODIFIED CROPS AND FOODS
Complete the following summary with proper words from the given options

Globally, public 1. to genetically modified (GM) foods vary, with americans and Asians generally 2. Or neutral and Europeans skeptical. The science is still in exact and there is 3. over what degree of regulation is desirable or even safe. Despite widespread criticism, one study found Gm crops to be more 4. friendly and much higher yields have impresses cotton 5. in Africa and India and crops growers in the 6. world in general.

Choose the proper word from the options given

- | | | | |
|--------------------|------------------|----------------|-----------------|
| A) environmentally | B) controversy | C) marmalade | D) enthusiastic |
| E) leaflets | F) investigation | G) developing | H) farmers |
| I) attitudes | J) areas | K) propanganda | L) consumer |

CHOOSING FACTORS - 8

Be like Spiderman with new Gecko Tape Read the passage and form the given options 1-3 choose the option

Option 1

- A. the soles of geckos feet are lined with soft fins of skin
- B. the soles of he geckos feet are covered with minute hair.
- C. The soles of the geckos feet are covered with tiny sticky pads.

Option 2

- A. when a hair touches a surface, an electro dynamic effect is generated.
- B. When a foot is peeled away an electro dynamic effect is generated.
- C. When a hair touches a surface an electromagnetic effect is generated

Option 3

- A. Adhesive efficiency depends on the chemical composition of the sticky excretion of the hairs.
- B. Adhesive efficiency depends on the physical structure of the hairs.
- C. Adhesive efficiency depends on the shape and size of the hairs.

Space travel

Read the passage and from the given options choose three right options from each questions

1. the first space explorers had to overcome the problems of...
 - A. living in a vaccum
 - B. inability to move around in their spacesuits.
 - C. Dealing with unprecedented degrees of external heat and cold.
 - D. Maintaining body temperature within the spacecraft.
 - E. Exposure to harmful cosmic rays.
 - F. Being hit by meteorites.
 - G. Suffering a buildup of carbon monoxide similar to divers 'bend'.
 - H. Dealing with increased gravitational pull.
2. the future of space exploration is dependent on
 - A. a global policy of nuclear non-proliferation
 - B. the global expansion science. Fiction
 - C. the general consensus of tax payers that space exploration is valuable.
 - D. Co-operate between countries interested in developments in space.
 - E. Technology advances.
 - F. Annihilation of terrestrial weapons of mass destruction.
 - G. Appropriate recruitment of volunteer personnel.

June 4: the great divide remains

Read the passage and choose the right option

1. the Chinese economy grew rapidly in the 1990s because of...
 - A. a rise in population density and workforce.
 - B. An influx of foreign investors.
 - C. Increased domestic productivity.
2. Wang believe it was good to wait later than 1989 to implement reforms successfully because...
 - A. in the future, the economy will downturn and reforms will be more appropriate then
 - B. political reforms should take place before economic growth is attempted

C. now, china is rich enough and people have a higher living standard.

3. According to Mr. Wang, the most important factors contributing to more democratic, stable and law abiding political system would be to...

- A. encourage Chinese entrepreneurs to invest abroad.
- B. Increase transparency and crack down on corruption
- C. Follow popular opinion when electing political candidates

IDENTIFYING THE WRITER'S VIEW - 9

June 4: the great divide remains

Read the passage and identify the writers view for the following questions in - 'Yes', 'No', 'Not given', FORM.

1. protesters demanding political reforms in Tianmen square in 1989 had misjudged their timing and should have waited.
2. the Chinese government should have concentrated on political, not economic reforms in the period prior to June 4th 1989.
3. The political reforms in China should be implemented within the next 2 or 3 years.
4. the party should pass laws enforcing an increase in small business and private enterprise.
5. the government should now start to make its decisions and policies more visible and available to the general public

Be like spiderman with new Gecko Tape

Read the passage and identify the writers view for the following questions in - 'Yes', 'No', 'Not given', FORM.

1. the writer think that Amercian comic characters are well known throughout the world.
2. the writer think that adults will appreciate the specific qualities of "gecko tape" but the children will not
3. the writer think that traveling at a speed of 1 metre per second is very fast for a gecko.
4. Academic think that, while the "gecko" adhesive formula is impressive, it has no practical commercial applications.
5. The U.S. military have funded research because they hope to enable their personnel to walk on walls and ceilings.

READING TEST 1

Agatti Island

A Agatti is one of the Lakshadweep Islands off the southwest coast of India. These islands are surrounded by lagoons and coral reefs which are in turn surrounded by the open ocean. Coral reefs, which are formed from the skeletons of minute sea creatures, give shelter to a variety of plants and animals, and therefore have the potential to provide a stream of diverse benefits to the inhabitants of Agatti Island.

B In the first place, the reefs provide food and other products for consumption by the islanders themselves. Foods include different types of fish, octopus and molluscs, and in the case of poorer families these constitute as much as 90% of the protein they consume. Reef resources are also used for medicinal purposes. For example, the money cowrie, a shell known locally as Vallakavadi, is commonly made into a paste and used as a home remedy to treat cysts in the eye.

C In addition, the reef contributes to income generation. According to a recent survey, 20% of the households on Agatti report lagoon fishing, or shingle, mollusc, octopus and cowrie collection as their main occupation (Hoon et al, 2002). For poor households, the direct contribution of the reef to their financial resources is significant: 12% of poor households are completely dependent on the reef for their household income, while 59% of poor households rely on the reef for 70% of their household income, and the remaining 29% for 50% of their household income.

D Bartering of reef resources also commonly takes place, both between islanders and between islands. For example, Agatti Island is known for its abundance of octopus, and this is often used to obtain products from nearby Androth Island. Locally, reef products may be given by islanders in return for favours, such as help in constructing a house or net mending; or for other products such as rice, coconuts or fish.

E The investment required to exploit the reefs is minimal. It involves simple, locally available tools and equipment, some of which can be used without a boat, such as the fishing practice known as Kat moodsal. This is carried out in the shallow eastern lagoon of Agatti by children and adults, close to shore at low tide, throughout the year. A small cast net, a leaf bag, and plastic slippers are all that are required, and the activity can yield 10–12 small fish (approximately 1 kg) for household consumption. Cast nets are not expensive, and all the households in Agatti own at least one. Even the boats, which operate in the lagoon and near-shore reef, are constructed locally and have low running costs. They are either small, non-mechanised, traditional wooden rowing boats, known as Thonis, or rafts, known as Tharappam.

F During more than 400 years of occupation and survival, the Agatti islanders have developed an intimate knowledge of the reefs. They have knowledge of numerous different types of fish and where they can be found according to the tide or lunar cycle. They have also developed a local naming system or folk taxonomy, naming fish according to their shape. Sometimes the same species is given different names depending on its size and age. For example, a full grown Emperor fish is called Metti and a juvenile is called Killokam. The abundance of each species at different fishing grounds is also well known. Along with this knowledge of reef resources, the islanders have developed a wide range of skills and techniques for exploiting them. A multitude of different fishing techniques are still used by the islanders, each targeting different areas of the reef and particular species.

G The reef plays an important role in the social lives of the islanders too, being an integral part of traditions and rituals. Most of the island's folklore revolves around the reef and sea. There is hardly any tale or song which does not mention the traditional sailing crafts, known as Odams, the journeys of enterprising 'heroes', the adventures of sea fishing and encounters with sea creatures. Songs that women sing recollect women looking for returning Odams, and requesting the waves to be gentler and the breeze just right for the sails. There are stories of the benevolent sea ghost baluvam, whose coming to shore is considered a harbinger of prosperity for that year, bringing more coconuts, more fish and general well-being.

H The reef is regarded by the islanders as common property, and all the islanders are entitled to use the lagoon and reef resources. In the past, fishing groups would obtain permission from the Amin (island head person) and go fishing in the grounds allotted by him. On their return, the Amin would be given a share of the catch, normally one of the best or biggest fish. This practice no longer exists, but there is still a code of conduct or etiquette for exploiting the reef, and common respect for this is an effective way of avoiding conflict or disputes.

READING TEST 1

I Exploitation of such vast and diverse resources as the reefs and lagoon surrounding the island has encouraged collaborative efforts, mainly for purposes of safety, but also as a necessity in the operation of many fishing techniques. For example, an indigenous gear and operation known as Bala fadal involves 25–30 men. Reef gleaning for cowrie collection by groups of 6–10 women is also a common activity, and even today, although its economic significance is marginal, it continues as a recreational activity.

Question 1-9 Reading Passage 1 has nine paragraphs A–I.
Choose the correct heading for each paragraph from the list of headings below.

List of Headings

- | | |
|------------------------------------|---|
| i Island legends | vii The social nature of reef occupations |
| ii Resources for exchange | viii Resources for islanders' own use |
| iii Competition for fishing rights | ix High levels of expertise |
| iv The low cost of equipment | x Alternative sources of employment |
| v Agatti's favourable location | xi Resources for earning money |
| vi Rising income levels | xii Social rights and obligations |

- | | |
|---------------------|---------------------|
| 1 Paragraph A | 2 Paragraph B |
| 3 Paragraph C | 4 Paragraph D |
| 5 Paragraph E | 6 Paragraph F |
| 7 Paragraph G | 8 Paragraph H |
| 9 Paragraph I | |

Question 10-13 Choose the correct letter, A, B, C or D.

- 10 What proportion of poor households get all their income from reef products?
A 12% **B** 20% **C** 29% **D** 59%
- 11 Kat moodsal fishing
A is a seasonal activity. **B** is a commercial activity.
C requires little investment. **D** requires use of a rowing boat.
- 12 Which characteristic of present-day islanders do the writers describe?
A physical strength **B** fishing expertise
C courage **D** imagination
- 13 What do the writers say about the system for using the reef on Agatti?
A Fish catches are shared equally. **B** The reef owner issues permits.
C There are frequent disputes. **D** There is open access.

Urban planning in Singapore

British merchants established a trading post in Singapore in the early nineteenth century, and for more than a century trading interests dominated. However, in 1965 the newly independent island state was cut off from its hinterland, and so it set about pursuing a survival strategy. The good international communications it already enjoyed provided a useful base, but it was decided that if Singapore was to secure its economic future, it must develop its industry. To this end, new institutional structures were needed to facilitate, develop, and control foreign investment. One of the most important of these was the Economic Development Board (EDB), an arm of government that developed strategies for attracting investment. Thus from the outset, the Singaporean government was involved in city promotion.

READING TEST 1

Towards the end of the twentieth century, the government realised that, due to limits on both the size of the country's workforce and its land area, its labour-intensive industries were becoming increasingly uncompetitive. So an economic committee was established which concluded that Singapore should focus on developing as a service centre, and seek to attract company headquarters to serve South East Asia, and develop tourism, banking, and offshore activities. The land required for this service-sector orientation had been acquired in the early 1970s, when the government realised that it lacked the banking infrastructure for a modern economy. So a new banking and corporate district, known as the 'Golden Shoe', was planned, incorporating the historic commercial area. This district now houses all the major companies and various government financial agencies.

Singapore's current economic strategy is closely linked to land use and development planning. Although it is already a major city, the current development plan seeks to ensure Singapore's continued economic growth through restructuring, to ensure that the facilities needed by future business are planned now. These include transport and telecommunication infrastructure, land, and environmental quality. A major concern is to avoid congestion in the central area, and so the latest plan deviates from previous plans by having a strong decentralisation policy. The plan makes provision for four major regional centres, each serving 800,000 people, but this does not mean that the existing central business district will not also grow. A major extension planned around Marina Bay draws on examples of other 'world cities', especially those with waterside central areas such as Sydney and San Francisco. The project involves major land reclamation of 667 hectares in total. Part of this has already been developed as a conference and exhibition zone, and the rest will be used for other facilities. However the need for vitality has been recognised and a mixed zoning approach has been adopted, to include housing and entertainment.

One of the new features of the current plan is a broader conception of what contributes to economic success. It encompasses high quality residential provision, a good environment, leisure facilities and exciting city life. Thus there is more provision for low-density housing, often in waterfront communities linked to beaches and recreational facilities. However, the lower housing densities will put considerable pressure on the very limited land available for development, and this creates problems for another of the plan's aims, which is to stress environmental quality. More and more of the remaining open area will be developed, and the only natural landscape surviving will be a small zone in the centre of the island which serves as a water catchment area. Environmental policy is therefore very much concerned with making the built environment more green by introducing more plants – what is referred to as the 'beautification' of Singapore. The plan focuses on green zones defining the boundaries of settlements, and running along transport corridors. The incidental green provision within housing areas is also given considerable attention.

Much of the environmental provision, for example golf courses, recreation areas, and beaches, is linked to the prime objective of attracting business. The plan places much emphasis on good leisure provision and the need to exploit Singapore's island setting. One way of doing this is through further land reclamation, to create a whole new island devoted to leisure and luxury housing which will stretch from the central area to the airport. A current concern also appears to be how to use the planning system to create opportunities for greater spontaneity: planners have recently given much attention to the concept of the 24-hour city and the cafe society. For example, a promotion has taken place along the Singapore river to create a cafe zone. This has included the realisation, rather late in the day, of the value of retaining older buildings, and the creation of a continuous riverside promenade. Since the relaxation in 1996 of strict guidelines on outdoor eating areas, this has become an extremely popular area in the evenings. Also, in 1998 the Urban Redevelopment Authority created a new entertainment area in the centre of the city which they are promoting as 'the city's one-stop, dynamic entertainment scene'.

In conclusion, the economic development of Singapore has been very consciously centrally planned and the latest strategy is very clearly oriented to establishing Singapore as a leading 'world city'. It is well placed to succeed, for a variety of reasons. It can draw upon its historic roots as a world trading centre; it has invested heavily in telecommunications and air transport infrastructure; it is well located in relation to other Asian economies; it has developed a safe and clean environment; and it has utilised the international language of English.

READING TEST 1

Question 14-19 Complete the summary below using words from the box.

Singapore

When Singapore became an independent, self-sufficient state it decided to build up its 14, and government organisations were created to support this policy. However, this initial plan met with limited success due to a shortage of 15 and land. It was therefore decided to develop the 16 sector of the economy instead.

Singapore is now a leading city, but planners are working to ensure that its economy continues to grow. In contrast to previous policies, there is emphasis on 17 In addition, land will be recovered to extend the financial district, and provide 18 as well as housing. The government also plans to improve the quality of Singapore's environment, but due to the shortage of natural landscapes it will concentrate instead on what it calls 19

decentralization
hospitals
trade
labour
agriculture

fuel
loans
transport
tourism

industry
deregulation
entertainment
hygiene

industry
service
recycling
beautification

Question 20-26 Do the following statements agree with the information given in Reading Passage 2?

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.

- 20 After 1965, the Singaporean government switched the focus of the island's economy.
a)
- 21 The creation of Singapore's financial centre was delayed while a suitable site was found.
a)
- 22 Singapore's four regional centres will eventually be the same size as its central business district.
a)
- 23 Planners have modelled new urban developments on other coastal cities.
a)
- 24 Plants and trees are amongst the current priorities for Singapore's city planners.
a)
- 25 The government has enacted new laws to protect Singapore's old buildings.
a)
- 26 Singapore will find it difficult to compete with leading cities in other parts of the world.
a)

Reading Passage 3

READING TEST 1

A Spice plants, such as coriander, cardamom or ginger, contain compounds which, when added to food, give it a distinctive flavour. Spices have been used for centuries in the preparation of both meat dishes for consumption and meat dishes for long-term storage. However, an initial analysis of traditional meat-based recipes indicated that spices are not used equally in different countries and regions, so we set about investigating global patterns of spice use.

B We hypothesized initially that the benefit of spices might lie in their anti-microbial properties. Those compounds in spice plants which give them their distinctive flavours probably first evolved to fight enemies such as plant-eating insects, fungi, and bacteria. Many of the organisms which afflict spice plants attack humans too, in particular the bacteria and fungi that live on and in dead plant and animal matter. So if spices kill these organisms, or inhibit their production of toxins, spice use in food might reduce our own chances of contracting food poisoning.

C The results of our investigation supported this hypothesis. In common with other researchers, we found that all spices for which we could locate appropriate information have some antibacterial effects: half inhibit more than 75% of bacteria, and four (garlic, onion, allspice and oregano) inhibit 100% of those bacteria tested. In addition, many spices are powerful fungicides.

D Studies also show that when combined, spices exhibit even greater anti-bacterial properties than when each is used alone. This is interesting because the food recipes we used in our sample specify an average of four different spices. Some spices are so frequently combined that the blends have acquired special names, such as 'chili powder' (typically a mixture of red pepper, onion, paprika, garlic, cumin and oregano) and 'oriental five spice' (pepper, cinnamon, anise, fennel and cloves). One intriguing example is the French 'quatre épices' (pepper, cloves, ginger and nutmeg) which is often used in making sausages. Sausages are a rich medium for bacterial growth, and have frequently been implicated as the source of death from the botulism toxin, so the value of the anti-bacterial compounds in spices used for sausage preparation is obvious.

E A second hypothesis we made was that spice use would be heaviest in areas where foods spoil most quickly. Studies indicate that rates of bacterial growth increase dramatically with air temperature. Meat dishes that are prepared in advance and stored at room temperatures for more than a few hours, especially in tropical climates, typically show massive increases in bacterial counts. Of course temperatures within houses, particularly in areas where food is prepared and stored, may differ from those of the outside air, but usually it is even hotter in the kitchen.

F Our survey of recipes from around the world confirmed this hypothesis: we found that countries with higher than average temperatures used more spices. Indeed, in hot countries nearly every meat-based recipe calls for at least one spice, and most include many spices, whereas in cooler ones, substantial proportions of dishes are prepared without spices, or with just a few. In other words, there is a significant positive correlation between mean temperature and the average quantity of spices used in cooking.

G But if the main function of spices is to make food safer to eat, how did our ancestors know which ones to use in the first place? It seems likely that people who happened to add spice plants to meat during preparation, especially in hot climates, would have been less likely to suffer from food poisoning than those who did not. Spice users may also have been able to store foods for longer before they spoiled, enabling them to tolerate longer periods of scarcity. Observation and imitation of the eating habits of these healthier individuals by others could spread spice use rapidly through a society. Also, families that used appropriate spices would rear a greater number of more healthy offspring, to whom spice-use traditions had been demonstrated, and who possessed appropriate taste receptors.

H Another question which arises is why did people develop a taste for spicy foods? One possibility involves learned taste aversions. It is known that when people eat something that makes them ill, they tend to avoid that taste subsequently. The adaptive value of such learning is obvious. Adding a spice to a food that caused sickness might alter its taste enough to make it palatable again (i.e. it tastes like a different food),

READING TEST 1

as well as kill the micro-organisms that caused the illness, thus rendering it safe for consumption. By this process, food aversions would more often be associated with unspiced (and therefore unsafe) foods, and food likings would be associated with spicy foods, especially in places where foods spoil rapidly. Over time people would have developed a natural preference for spicy food.

Of course, spice use is not the only way to avoid food poisoning. Cooking, and completely consuming wild game immediately after slaughter reduces opportunities for the growth of micro-organisms. However, this is practical only where fresh meat is abundant year-round. In areas where fresh meat is not consistently available, preservation may be accomplished by thoroughly cooking, salting, smoking, drying, and spicing meats. Indeed, salt has been used worldwide for centuries to preserve food. We suggest that all these practices have been adopted for essentially the same reason: to minimize the effects of harmful, food-borne organisms.

1 poisons produced by living organisms, especially bacteria

Question 27-33 Reading Passage 3 has nine paragraphs, labelled A-I.

Which paragraphs contain the following information?

- 27 an example of a food which particularly benefits from the addition of spices.
- 28 a range of methods for making food safer to eat.
- 29 a comparison between countries with different climate types.
- 30 an explanation of how people first learned to select appropriate spices.
- 31 a method of enhancing the effectiveness of individual spices.
- 32 the relative effectiveness of certain spices against harmful organisms.
- 33 the possible origins of a dislike for unspiced foods.

Question 34-39 Answer the questions below with words taken from Reading Passage 3. Use **NO MORE THAN TWO WORDS** for each answer.

- 34 According to the writers, what might the use of spices in cooking help people to avoid?
- 35 What proportion of bacteria in food do four of the spices tested destroy?
- 36 Which food often contains a spice known as 'quatre epices'?
- 37 Which types of country use the fewest number of spices in cooking?
- 38 What might food aversions often be associated with?
- 39 Apart from spices, which substance is used in all countries to preserve food?

Question 40 Choose the correct letter, A, B, C, or D.

- 40 Which is the best title for Reading Passage 3?
 - A The function of spices in food preparation
 - B A history of food preservation techniques
 - C Traditional recipes from around the world
 - D An analysis of the chemical properties of spice plants

READING TEST 4

Reading Passage 1

NETWORKING

Networking as a concept has acquired what is in all truth an unjustified air of modernity. It is considered in the corporate world as an essential tool for the modern businessperson, as they trot round the globe drumming up business for themselves or a corporation. The concept is worn like a badge of distinction, and not just in the business world.

People can be divided basically into those who keep knowledge and their personal contacts to themselves, and those who are prepared to share what they know and indeed their friends with others. A person who is insecure, for example someone who finds it difficult to share information with others and who is unable to bring people, including friends, together does not make a good networker. The classic networker is someone who is strong enough within themselves to connect different people including close friends with each other. For example, a businessman or an academic may meet someone who is likely to be a valuable contact in the future, but at the moment that person may benefit from meeting another associate or friend.

It takes quite a secure person to bring these people together and allow a relationship to develop independently of himself. From the non-networker's point of view such a development may be intolerable, especially if it is happening outside their control. The unfortunate thing here is that the initiator of the contact, if he did not know it, would be the one to benefit most. And why? Because all things being equal, people move within circles and that person has the potential of being sucked into ever growing spheres of new contacts. It is said that, if you know eight people, you are in touch with everyone in the world. It does not take much common sense to realize the potential for any kind of venture as one is able to draw on the experience of more and more people.

Unfortunately, making new contacts, business or otherwise, while it brings success, does cause problems. It enlarges the individual's world. This is in truth not altogether a bad thing, but it puts more pressure on the networker through his having to maintain an ever larger circle of people. The most convenient way out is, perhaps, to cull old contacts, but this would be anathema to our networker as it would defeat the whole purpose of networking. Another problem is the reaction of friends and associates. Spreading oneself thinly gives one less time for others who were perhaps closer to one in the past. In the workplace, this can cause tension with jealous colleagues, and even with superiors who might be tempted to rein in a more successful inferior. Jealousy and envy can prove to be very detrimental if one is faced with a very insecure manager, as this person may seek to stifle someone's career or even block it completely.

The answer here is to let one's superiors share in the glory; to throw them a few crumbs of comfort. It is called leadership from the bottom. In the present business climate, companies and enterprises need to co-operate with each other in order to expand. As globalization grows apace, companies need to be able to span not just countries but continents. Whilst people may rail against this development it is for the moment here to stay. Without co-operation and contacts, specialist companies will not survive for long. Computer components, for example, need to be compatible with the various machines on the market and to achieve this, firms need to work in conjunction with others. No business or institution can afford to be an island in today's environment. In the not very distant past, it was possible for companies to go it alone, but it is now more difficult to do so.

The same applies in the academic world, where ideas have been jealously guarded. The opening-up of universities and colleges to the outside world in recent years has been of enormous benefit to industry and educational institutions. The stereotypical academic is one who moves in a rarefied atmosphere living a life of sometimes splendid isolation, a prisoner of their own genius. This sort of person does not fit easily into the mould of the modern networker. Yet even this insular world is changing. The ivory towers are being left ever more frequently as educational experts forge links with other bodies; sometimes to stunning effect as in Silicon Valley in America and around Cambridge in England, which now has one of the most concentrated clusters of high tech companies in Europe.

It is the networkers, the wheeler-dealers, the movers and shakers, call them what you will, that carry the world along. The world of the Neanderthals was shaken between 35,000 and 40,000 BC; they were superseded by Homo Sapiens with the very 'networking' skills that separate us from other animals: understanding, thought abstraction and culture, which are inextricably linked to planning survival and productivity in humans. It is said the meek will inherit the earth. But will they?

READING TEST 4

Questions 1-5 Do the following statements agree with the information given in Reading Passage 1?

Write

- YES if the statement agrees with the writer's claims
- NO if the statement contradicts the writer's claims
- NOT GIVEN if there is impossible to say what the writer thinks about this

Example

Networking is a concept

Answer

Yes

- 1 Networking is not a modern idea.
- 2 Networking is worn like a badge exclusively in the business world.
- 3 People fall into two basic categories.
- 4 A person who shares knowledge and friends makes a better networker than one who does not. ✓
- 5 The classic networker is physically strong and generally in good health.

Questions 6-10 Using NO MORE THAN THREE WORDS from the passage, complete the sentences below.

- 6 Making new acquaintances but also has its disadvantages.
- 7 At work, problems can be caused if the manager is
- 8 A manager can suppress, or even totally the career of an employee.
- 9 In business today, working together is necessary in order for to grow.
- 10 Businesses that specialize will not last for long without

Questions 11-15 Using NO MORE THAN THREE WORDS from the passage, complete the sentences below.

Using NO MORE THAN THREE WORDS from the passage, complete the sentences below.

- 11 In which sphere of life have ideas been protected jealously?
- 12 Which type of individual does not easily become a modern networker?
- 13 Where is one of the greatest concentrations of high tech companies in Europe?
- 14 Who replaced the Neanderthals?
- 15 What, as well as understanding and thought abstraction, sets us apart from other animals?

Reading Passage 2

A SILENT FORCE

A There is a legend that St Augustine in the fourth century AD was the first individual to be seen reading silently rather than aloud, or semi-aloud, as had been the practice hitherto. Reading has come a long way since Augustine's day. There was a time when it was a menial job of scribes and priests, not the mark of civilization it became in Europe during the Renaissance when it was seen as one of the attributes of the civilized individual.

B Modern nations are now seriously affected by their levels of literacy. While the Western world has seen a noticeable decline in these areas, other less developed countries have advanced and, in some cases, overtaken the West. India, for example, now has a large pool of educated workers. So European countries can no longer rest on their laurels as they have done for far too long; otherwise, they are in danger of falling even further behind economically.

READING TEST 4

C It is difficult in the modern world to do anything other than a basic job without being able to read. Reading as a skill is the key to an educated workforce, which in turn is the bedrock of economic advancement, particularly in the present technological age. Studies have shown that by increasing the literacy and numeracy skills of primary school children in the UK, the benefit to the economy generally is in billions of pounds. The skill of reading is now no more just an intellectual or leisure activity, but rather a fully-fledged economic force.

D Part of the problem with reading is that it is a skill which is not appreciated in most developed societies. This is an attitude that has condemned large swathes of the population in most Western nations to illiteracy. It might surprise people in countries outside the West to learn that in the United Kingdom, and indeed in some other European countries, the literacy rate has fallen to below that of so-called less developed countries.

E There are also forces conspiring against reading in our modern society. It is not seen as cool among a younger generation more at home with computer screens or a Walkman. The solitude of reading is not very appealing. Students at school, college or university who read a lot are called bookworms. The term indicates the contempt in which reading and learning are held in certain circles or subcultures. It is a criticism, like all such attacks, driven by the insecurity of those who are not literate or are semi-literate. Criticism is also a means, like all bullying, of keeping peers in place so that they do not step out of line. Peer pressure among young people is so powerful that it often kills any attempts to change attitudes to habits like reading.

F But the negative connotations apart, is modern Western society standing Canute-like against an uncontrollable spiral of decline? I think not.

G How should people be encouraged to read more? It can easily be done by increasing basic reading skills at an early age and encouraging young people to borrow books from schools. Some schools have classroom libraries as well as school libraries. It is no good waiting until pupils are in their secondary school to encourage an interest in books; it needs to be pushed at an early age. Reading comics, magazines and low brow publications like Mills and Boon is frowned upon. But surely what people, whether they be adults or children, read is of little import. What is significant is the fact that they are reading. Someone who reads a comic today may have the courage to pick up a more substantial tome later on.

But perhaps the best idea would be to stop the negative attitudes to reading from forming in the first place. Taking children to local libraries brings them into contact with an environment where they can become relaxed among books. If primary school children were also taken in groups into bookshops, this might also entice them to want their own books. A local bookshop, like some local libraries, could perhaps arrange book readings for children which, being away from the classroom, would make the reading activity more of an adventure. On a more general note, most countries have writers of national importance. By increasing the standing of national writers in the eyes of the public, through local and national writing competitions, people would be drawn more to the printed word. Catch them young and, perhaps, they just might then all become bookworms.

Questions 16-22 Reading Passage 2 has eight paragraphs labelled A-H.

Choose the most suitable heading for each paragraph from the list of headings below. Write the appropriate numbers (i-xii) in boxes 16-22 on your answer sheet. One of the headings has been done for you as an example. Any heading may be used more than once.

Note: There are more headings than paragraphs, so you will not use all of them.

List of Headings

- i Reading not taken for granted
- ii Taking children to libraries
- iii Reading: the mark of civilization
- iv Reading in St Augustine's day
- v A large pool of educated workers in India
- vi Literacy rates in developed countries have declined because of people's attitude
- vii Persuading people to read

READING TEST 4

- viii Literacy influences the economies of countries in today's world
 xi Reading benefits the economy by billions of pounds
 x The attitude to reading amongst the young
 xi Reading becomes an economic force
 xii The writer's attitude to the decline in reading

Example Paragraph H Answer vii
 Questions 23-27

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

- YES if the statement agrees with the writer's claims
 NO if the statement contradicts the writer's claims
 NOT GIVEN if there is impossible to say what the writer thinks about this

Example: According to legend, St Augustine was the first person to be seen reading silently.
 Answer Yes

- 23 European countries have been satisfied with past achievements for too long and have allowed other countries to overtake them in certain areas.
 24 Reading is an economic force.
 25 The literacy rate in less developed nations is considerably higher than in all European countries.
 26 If you encourage children to read when they are young the negative attitude to reading that grows in some subcultures will be eliminated.
 27 People should be discouraged from reading comics and magazines.

Reading Passage 3

Variations on a theme:

The sonnet form in English poetry

A The form of lyric poetry known as 'the sonnet', or 'little song', was introduced into the English poetic corpus by Sir Thomas Wyatt the Elder and his contemporary Henry Howard, Earl of Surrey, during the first half of the sixteenth century. It originated, however, in Italy three centuries earlier, with the earliest examples known being those of Giacomo de Lentino, 'The Notary' in the Sicilian court of the Emperor Frederick II, dating from the third decade of the thirteenth century. The Sicilian sonneteers are relatively obscure, but the form was taken up by the two most famous poets of the Italian Renaissance, Dante and Petrarch, and indeed the latter is regarded as the master of the form.

B The Petrarchan sonnet form, the first to be introduced into English poetry, is a complex poetic structure. It comprises fourteen lines written in a rhyming metrical pattern of iambic pentameter, that is to say each line is ten syllables long, divided into five 'feet' or pairs of syllables (hence 'pentameter'), with a stress pattern where the first syllable of each foot is unstressed and the second stressed (an iambic foot). This can be seen if we look at the first line of one of Wordsworth's sonnets, 'After-Thought':

'I thought of thee my partner and my guide'. If we break down this line into its constituent syllabic parts, we can see the five feet and the stress pattern (in this example each stressed syllable is underlined), thus: 'I thought/ of thee/ my partner and/ my guide'.

C The rhyme scheme for the Petrarchan sonnet is equally as rigid. The poem is generally divided into two parts, the octave (eight lines) and the sestet (six lines), which is demonstrated through rhyme rather than an actual space between each section. The octave is usually rhymed **abbaabba** with the first, fourth, fifth and eighth lines rhyming with each other, and the second, third, sixth and seventh also rhyming. The sestet is more varied: it can follow the patterns **cdecde**, **cdccdc**, or **cdedce**. Perhaps the best interpretation of this division in the Petrarchan sonnet is by Charles Gayley, who wrote: "The octave bears the burden; a doubt, a problem, a reflection, a query, an historical statement, a cry of indignation or desire, a vision of the ideal. The sestet eases the load, resolves the problem or doubt, answers the query or doubt, solaces the yearning, realizes the vision." Thus, we can see that the rhyme scheme demonstrates a twofold division in the poem, providing a structure for the development of themes and ideas.

READING TEST 4

D Early on, however, English poets began to vary and experiment with this structure. The first major development was made by Henry Howard, Earl of Surrey, altogether an indifferent poet, but was taken up and perfected by William Shakespeare, and is named after him. The Shakespearean sonnet also has fourteen lines in iambic pentameter, but rather than the division into octave and sestet, the poem is divided into four parts: three quatrains and a final rhyming couplet. Each quatrain has its own internal rhyme scheme, thus a typical Shakespearean sonnet would rhyme **abab cdcd efef gg**. Such a structure naturally allows greater flexibility for the author and it would be hard, if not impossible, to enumerate the different ways in which it has been employed, by Shakespeare and others. For example, an idea might be introduced in the first quatrain, complicated in the second, further complicated in the third, and resolved in the final couplet - indeed, the couplet is almost always used as a resolution to the poem, though often in a surprising way.

E These, then, are the two standard forms of the sonnet in English poetry, but it should be recognized that poets rarely follow rules precisely and a number of other sonnet types have been developed, playing with the structural elements. Edmund Spenser, for example, more famous for his verse epic 'The Faerie Queene', invented a variation on the Shakespearean form by interlocking the rhyme schemes between the quatrains, thus: **abab bcbc cdcd ee**, while in the twentieth century Rupert Brooke reversed his sonnet, beginning with the couplet. John Milton, the seventeenth-century poet, was unsatisfied with the fourteen-line format and wrote a number of 'Caudate' sonnets, or 'sonnets with the regular fourteen lines (on the Petrarchan model) with a 'coda' or 'tail' of a further six lines. A similar notion informs George Meredith's sonnet sequence 'Modern Love', where most sonnets in the cycle have sixteen lines.

F Perhaps the most radical of innovators, however, has been Gerard Manley Hopkins, who developed what he called the 'Curtal' sonnet. This form varies the length of the poem, reducing it in effect to eleven and a half lines, the rhyme scheme and the number of feet per line. Modulating the Petrarchan form, instead of two quatrains in the octave, he has two tercets rhyming **abc abc**, and in place of the sestet he has four and a half lines, with a rhyme scheme **dcdbdc**. As if this is not enough, the tercets are no longer in iambic pentameter, but have six stresses instead of five, as does the final quatrain, with the exception of the last line, which has three. Many critics, however, are sceptical as to whether such a major variation can indeed be classified as a sonnet, but as verse forms and structures become freer, and poets less satisfied with convention, it is likely that even more experimental forms will out.

Questions 28-32 Reading Passage 3 has eight paragraphs labelled A-H.

Choose the most suitable heading for each paragraph from the list of headings below.

One of the headings has been done for you as an example. Any heading may be used more than once.

Note: There are more headings than paragraphs, so you will not use all of them.

List of Headings

- | | | | |
|------|---|------|---|
| i | Octave develops sestet | ii | The Faerie Queene and Modern Love |
| iii | The origins of the sonnet | iv | The Shakespearean sonnet form |
| v | The structure of the Petrarchan sonnet form | vi | A real sonnet? |
| vii | Rhyme scheme provides structure developing themes and ideas | | |
| viii | Dissatisfaction with format | xi | The Sicilian sonneteers |
| x | Howard v. Shakespeare | xi | Wordsworth's sonnet form |
| xii | Future breaks with convention | xiii | The sonnet form: variations and additions |

Example Paragraph A *Answer* iii

Questions 33-37 Using **NO MORE THAN THREE WORDS** from the passage, complete the sentences below.

33 Sir Thomas Wyatt the Elder and Henry Howard were

READING TEST 4

- 34 It was in the third decade of the thirteenth century that the sonnet/little song ~~was~~ introduced.
- 35 Among poets of the Italian Renaissance ~~was~~ was considered to be the better sonneteer.
- 36 The ~~sonnet~~ sonnet form consists of fourteen lines/octave and sestet .
- 37 In comparison with the octave, the rhyming scheme of the sestet is more varied.

Questions 38-40 Choose the correct letters A-D and write them in boxes 38-40 on your answer sheet.

- 38 According to Charles Gayley,
 A the octave is longer than the sestet.
 C the sestet provides answers and solutions.
- B the octave develops themes and ideas.
 D the sestet demonstrates a twofold division.
- 39 The Shakespearean sonnet is
 A an indifferent development.
 C more flexible than the Petrarchan sonnet.
- B more developed than the Petrarchan sonnet.
 D enumerated in different ways.
- 40 According to the passage, whose sonnet types are similar?
 A Spenser and Brooke
 C Hopkins and Spenser
- B Brooke and Milton
 D Milton and Meredith

In Praise of Amateurs

Despite the specialization of scientific research, amateurs 'still have an important role to play

During the scientific revolution of the 17th century, scientists were largely men of private means who pursued their interest in natural philosophy for their own edification. Only in the past century or two has it become possible to make a living from investigating the workings of nature. Modern science was, in other words, built on the work of amateurs. Today, science is an increasingly specialized and compartmentalized subject, the domain of experts who know more and more about less and less. Perhaps surprisingly, however, amateurs - even those without private means - are still important.

A recent poll carried out at a meeting of the American Association for the Advancement of Science by astronomer Dr Richard Fienberg found that, in addition to his field of astronomy, amateurs are actively involved in such fields as acoustics, horticulture, ornithology, meteorology, hydrology and paleontology. Far from being crackpots, amateur scientists are often in close touch with professionals, some of whom rely heavily on their co-operation. Admittedly, some fields are more open to amateurs than others. Anything that requires expensive equipment is clearly a no-go area. And some kinds of research can be dangerous; most amateur chemists, jokes Dr Fienberg, are either locked up or have blown themselves to bits. But amateurs can make valuable contributions in fields from rocketry to paleontology and the rise of the Internet has made it easier than ever before to collect data and distribute results. Exactly which field of study has benefited most from the contributions of amateurs is a matter of some dispute. Dr Fienberg makes a strong case for astronomy. There is, he points out, a long tradition of collaboration between amateur and professional sky watchers. Numerous comets, asteroids and even the planet Uranus were discovered by amateurs. Today, in addition to comet and asteroid spotting, amateurs continue to do valuable work observing the brightness of variable stars and detecting novae - 'new' stars in the Milky Way and supernovae in other galaxies. Amateur observers are helpful, says Dr Fienberg, because there are so many of them (they far outnumber professionals) and because they are distributed all over the world. This makes special kinds of observations possible: if several observers around the world accurately record the time when a star is eclipsed by an asteroid, for example, it is possible to derive useful information about the asteroid's shape.

Another field in which amateurs have traditionally played an important role is paleontology. Adrian Hunt, a paleontologist at Mesa Technical College in New Mexico, insists that his is the field in which amateurs have made the biggest contribution. Despite the development of high-tech equipment, he says, the best sensors for finding fossils are human eyes - lots of them. Finding volunteers to look for fossils is not difficult, he says, because of the near-universal interest in anything to do with dinosaurs. As well as helping with this research, volunteers learn about science, a process he calls 'recreational education'. Rick Bonney of the Cornell Laboratory of Ornithology in Ithaca, New York, contends that amateurs have contributed the most in his field. There are, he notes, thought to be as many as 60 million birdwatchers in America alone. Given their huge numbers and the wide geographical coverage they provide, Mr Bonney has enlisted thousands of amateurs in a number of research projects. Over the past few years their observations have uncovered previously unknown trends and cycles in bird migrations and revealed declines in the breeding populations of several species of migratory birds, prompting a habitat conservation programme.

Despite the successes and whatever the field of study, collaboration between amateurs and professionals is not without its difficulties. Not everyone, for example is happy with the term 'amateur'. Mr Bonney has coined the term 'citizen scientist' because he felt that other words, such as 'volunteer' sounded disparaging. A more serious problem is the question of how professionals can best acknowledge the contributions made

by amateurs. Dr Fienberg says that some amateur astronomers are happy to provide their observations but grumble about not being reimbursed for out-of-pocket expenses. Others feel let down when their observations are used in scientific papers, but they are not listed as co-authors. Dr Hunt says some amateur paleontologists are disappointed when told that they cannot take finds home with them. These are legitimate concerns but none seems insurmountable. Provided amateurs and professionals agree the terms on which they will work together beforehand, there is no reason why co-operation between the two groups should not flourish. Last year Dr S. Carlson, founder of the Society for Amateur Scientists won an award worth \$290,000 for his work in promoting such co-operation. He says that one of the main benefits of the prize is the endorsement it has given to the contributions of amateur scientists, which has done much to silence critics among those professionals who believe science should remain their exclusive preserve.

At the moment, says Dr Carlson, the society is involved in several schemes including an innovative rocket-design project and the setting up of a network of observers who will search for evidence of a link between low-frequency radiation and earthquakes. The amateurs, he says, provide enthusiasm and talent, while the professionals provide guidance 'so that anything they do discover will be taken seriously'. Having laid the foundations of science, amateurs will have much to contribute to its ever-expanding edifice.

Questions 1-8 Complete the summary below. Choose ONE or TWO WORDS from the passage for each answer. Summary:

Prior to the 19th century, professional ... 1 ... did not exist and scientific research was largely carried out by amateurs. However, while ... 2 ... today is mostly the domain of professionals, a recent US survey highlighted the fact that amateurs play an important role in at least seven ... 3, ... and indeed many professionals are reliant on their ... 4 In areas such as astronomy, amateurs can be invaluable when making specific ... 5 ... on a global basis. Similarly in the area of paleontology their involvement is invaluable and helpers are easy to recruit because of the popularity of ... 6 Amateur birdwatchers also play an active role and their work has led to the establishment of a ... 7 Occasionally the term 'amateur' has been the source of disagreement and alternative names have been suggested but generally speaking, as long as the professional scientists ... 8 ... the work of the non-professionals, the two groups can work productively together.

Questions 9-13 Reading Passage I contains a number of opinions provided by four different scientists. Match each opinion (Questions 9-13) with the scientists A-D. NB You may use any of the scientists A-D more than once.

- 9 Amateur involvement can also be an instructive pastime.
- 10 Amateur scientists are prone to accidents.
- 11 Science does not belong to professional scientists alone.
- 12 In certain areas of my work, people are a more valuable resource than technology.
- 13 It is important to give amateurs a name which reflects the value of their work.

A Dr Fienberg
C Rick Bonney

B Adrian Hunt
D Dr Carlson

TEA TIMES

A The chances are that you have already drunk a cup or glass of tea today. Perhaps, you are sipping one as you read this. Tea, now an everyday beverage in many parts of the world, has over the centuries been an important part of the rituals of hospitality both in the home and in wider society.

B Tea originated in China, and in Eastern Asia tea making and drinking ceremonies have been popular for centuries. Tea was first shipped to North Western Europe by English and Dutch maritime traders in the sixteenth century. At about the same time, a land route from the Far East, via Moscow, to Europe was opened up. Tea also figured in America's bid for independence from British rule - the Boston Tea Party.

C As, over the last four hundred years, tea-leaves became available throughout much of Asia and Europe, the ways in which tea was drunk changed. The Chinese considered the quality of the leaves and the ways in which they were cured all important. People in other cultures added new ingredients besides tea-leaves and hot water. They drank tea with milk, sugar, spices like cinnamon and cardamom, and herbs such as mint or sage. The variations are endless. For example, in Western Sudan on the edge of the Sahara Desert, sesame oil is added to milky tea on cold mornings. In England tea, unlike coffee, acquired a reputation as a therapeutic drink that promoted health. Indeed, in European and Arab countries as well as in Persia and Russia, tea was praised for its restorative and health giving properties. One Dutch physician, Cornelius Blankaart, advised that to maintain health a minimum of eight to ten cups a day should be drunk, and that up to 50 to 100 daily cups could be consumed with safety.

D While European coffee houses were frequented by men discussing politics and closing business deals, respectable middle-class women stayed at home and held tea parties. When the price of tea fell in the nineteenth century poor people took up the drink with enthusiasm. Different grades and blends of tea were sold to suit every pocket.

E Throughout the world today, few religious groups object to tea drinking. In Islamic cultures, where drinking of alcohol is forbidden, tea and coffee consumption is an important part of social life. However, Seventh-Day Adventists, recognising the beverage as a drug containing the stimulant caffeine, frown upon the drinking of tea.

F Nomadic Bedouin are well known for traditions of hospitality in the desert. According to Middle Eastern tradition, guests are served both tea and coffee from pots kept ready on the fires of guest tents where men of the family and male visitors gather. Cups of 'bitter' cardamom coffee and glasses of sugared tea should be constantly refilled by the host.

G For over a thousand years, Arab traders have been bringing Islamic culture, including tea drinking, to northern and western Africa. Techniques of tea preparation and the ceremony involved have been adapted. In West African countries, such as Senegal and The Gambia, it is fashionable for young men to gather in small groups to brew Chinese 'gunpowder' tea. The tea is boiled with large amounts of sugar for a long time.

H Tea drinking in India remains an important part of daily life. There, tea made entirely with milk is popular. 'Chai' is made by boiling milk and adding tea, sugar and some spices. This form of tea making has crossed the Indian Ocean and is also popular in East Africa, where tea is considered best when it is either very milky or made with water only. Curiously, this 'milk or water' formula has been carried over to the preparation of instant coffee, which is served in cafes as either black, or sprinkled on a cup of hot milk.

I In Britain, coffee drinking, particularly in the informal atmosphere of coffee shops, is currently in vogue. Yet the convention of afternoon tea lingers. At conferences, it remains common practice to serve coffee in the morning and tea in the afternoon. Contemporary China, too, remains true to its long tradition. Delegates at

READING PASSAGE

conferences and seminars are served tea in cups with lids to keep the infusion hot. The cups are topped up throughout the proceedings. There are as yet no signs of coffee at such occasions.

Questions 1 – 8 Reading Passage has nine paragraphs A-I. From the list of headings below choose the most suitable heading for each paragraph.

List of Headings

- | | | | |
|-----|---|------|-------------------------------|
| i | Diverse drinking methods | viii | Tea on the move |
| ii | Limited objections to drinking tea | ix | African tea |
| iii | Today's continuing tradition - in Britain and China | x | The fall in the cost of tea |
| iv | Tea - a beverage of hospitality | xi | The value of tea |
| v | An important addition - tea with milk | xii | Tea-drinking in Africa |
| vi | Tea and alcohol | xiii | Hospitality among the Bedouin |
| vii | The everyday beverage in all parts of the world | | |

- | | | | | | | | | |
|---|-------------|---|-------------|---|-------------|---|-------------|---|
| 1 | Paragraph A | 2 | Paragraph B | 3 | Paragraph C | 4 | Paragraph D | 5 |
| | Paragraph E | | | | | | | |
| 6 | Paragraph G | 7 | Paragraph H | 8 | Paragraph I | | | |

Example.

Answer

Paragraph F

xiii

Questions 9 – 13

Complete the sentences below with words taken from Reading Passage

Use **NO MORE THAN THREE WORDS** for each answer.

- 9 For centuries, both at home and in society, tea has had an important role in
- 10 Falling tea prices in the nineteenth century meant that people could choose the of the tea they could afford.
- 11 Because it Seventh-Day Adventists do not approve of the drinking of tea.
- 12 In the desert, one group that is well known for its traditions of hospitality is the
- 13 In India, as well as tea, are added to boiling milk to make 'chai'.

READING PASSAGE 2

You should spend about 20 minutes on **Questions 14–26**, which are based on Reading Passage 2 on the following pages.

Questions 14–17

Reading Passage 2 has five paragraphs, **A–E**.

Choose the correct heading for paragraphs **B–E** from the list of headings below.

Write the correct number, **i–vii**, in boxes 14–17 on your answer sheet.

List of Headings

- i** Seeking the transmission of radio signals from planets
- ii** Appropriate responses to signals from other civilisations
- iii** Vast distances to Earth's closest neighbours
- iv** Assumptions underlying the search for extra-terrestrial intelligence
- v** Reasons for the search for extra-terrestrial intelligence
- vi** Knowledge of extra-terrestrial life forms
- vii** Likelihood of life on other planets

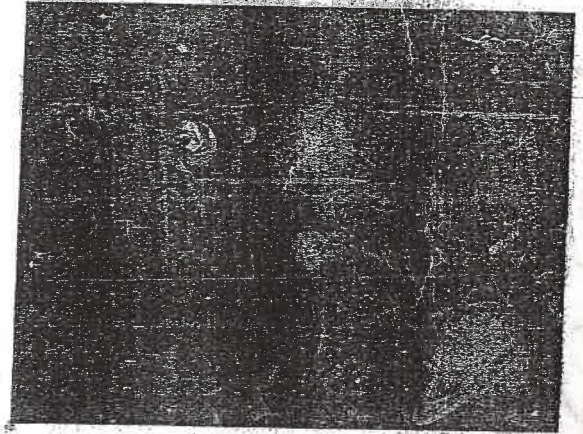
Example
Paragraph A

Answer
v

- 14 Paragraph B
- 15 Paragraph C
- 16 Paragraph D
- 17 Paragraph E

IS THERE ANYBODY OUT THERE? The Search for Extra-terrestrial Intelligence

The question of whether we are alone in the Universe has haunted humanity for centuries, but we may now stand poised on the brink of the answer to that question, as we search for radio signals from other intelligent civilisations. This search, often known by the acronym SETI (search for extra-terrestrial intelligence), is a difficult one. Although groups around the world have been searching intermittently for three decades, it is only now that we have reached the level of technology where we can make a determined attempt to search all nearby stars for any sign of life.



A

The primary reason for the search is basic curiosity – the same curiosity about the natural world that drives all pure science. We want to know whether we are alone in the Universe. We want to know whether life evolves naturally if given the right conditions, or whether there is something very special about the Earth to have fostered the variety of life forms that we see around us on the planet. The simple detection of a radio signal will be sufficient to answer this most basic of all questions. In this sense, SETI is another cog in the machinery of pure science which is continually pushing out the horizon of our knowledge. However, there are other reasons for being interested in whether life exists elsewhere. For example, we have had civilisation on Earth for perhaps only a few thousand years, and the threats of nuclear war and pollution over the last few decades have told us that our survival may be tenuous. Will we last another two thousand years or will we wipe ourselves out? Since the lifetime of a planet like ours is several billion years, we can expect that, if other civilisations do survive in our galaxy, their ages will range from zero to several billion years. Thus any other civilisation that we hear from is likely to be far older, on average, than ourselves. The mere existence of such a civilisation will tell us that long-term survival is possible, and gives us some cause for optimism. It is even possible that the older civilisation may pass on the benefits of their experience in dealing with threats to survival such as nuclear war and global pollution, and other threats that we haven't yet discovered.

B

In discussing whether we are alone, most SETI scientists adopt two ground rules. First, UFOs (Unidentified Flying Objects) are generally ignored since most scientists don't consider the evidence for them to be strong enough to bear serious consideration (although it is also important to keep an open mind in case any really convincing evidence emerges in the future). Second, we make a very conservative assumption that we are looking for a life form that is pretty well like us, since if it differs radically from us we may well not recognise it as a life form, quite apart from whether we are able to communicate

with it. In other words, the life form we are looking for may well have two green heads and seven fingers, but it will nevertheless resemble us in that it should communicate with its fellows, be interested in the Universe, live on a planet orbiting a star like our Sun, and perhaps most restrictively, have a chemistry, like us, based on carbon and water.

C

Even when we make these assumptions, our understanding of other life forms is still severely limited. We do not even know, for example, how many stars have planets, and we certainly do not know how likely it is that life will arise naturally, given the right conditions. However, when we look at the 100 billion stars in our galaxy (the Milky Way), and 100 billion galaxies in the observable Universe, it seems inconceivable that at least one of these planets does not have a life form on it; in fact, the best educated guess we can make, using the little that we do know about the conditions for carbon-based life, leads us to estimate that perhaps one in 100,000 stars might have a life-bearing planet orbiting it. That means that our nearest neighbours are perhaps 100 light years away, which is almost next door in astronomical terms.

D

An alien civilisation could choose many different ways of sending information across the galaxy, but many of these either require too much energy, or else are severely attenuated while traversing the vast distances across the galaxy. It turns out that, for a given amount of transmitted power, radio waves in the frequency range 1000 to 3000 MHz travel the greatest distance, and so all searches to date have concentrated on looking for radio waves in this frequency range. So far there have been a number of searches by various groups around the world, including Australian searches using the radio telescope at Parkes, New South Wales. Until now there have not been any detections from the few hundred stars which have been searched. The scale of the searches has been increased dramatically since 1992, when the US Congress voted NASA \$10 million per year for ten years to conduct a thorough search for extra-terrestrial life. Much of the money in this project is being spent on developing the special hardware needed to search many frequencies at once. The project has two parts. One part is a targeted search using the world's largest radio telescopes, the American-operated telescope in Arecibo, Puerto Rico and the French telescope in Nancy in France. This part of the project is searching the nearest 1000 likely stars with high sensitivity for signals in the frequency range 1000 to 3000 MHz. The other part of the project is an undirected search which is monitoring all of space with a lower sensitivity, using the smaller antennas of NASA's Deep Space Network.

E

There is considerable debate over how we should react if we detect a signal from an alien civilisation. Everybody agrees that we should not reply immediately. Quite apart from the impracticality of sending a reply over such large distances at short notice, it raises a host of ethical questions that would have to be addressed by the global community before any reply could be sent. Would the human race face the culture shock if faced with a superior and much older civilisation? Luckily, there is no urgency about this. The stars being searched are hundreds of light years away, so it takes hundreds of years for their signal to reach us, and a further few hundred years for our reply to reach them. It's not important, then, if there's a delay of a few years, or decades, while the human race debates the question of whether to reply, and perhaps carefully drafts a reply.

Test 1

Questions 18–20

Answer the questions below.

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

Write your answers in boxes 18–20 on your answer sheet.

- 18 What is the life expectancy of Earth?
- 19 What kind of signals from other intelligent civilisations are SETI scientists searching for?
- 20 How many stars are the world's most powerful radio telescopes searching?

Questions 21–26

Do the following statements agree with the views of the writer in Reading Passage 2?

In boxes 21–26 on your answer sheet, write

YES

if the statement agrees with the views of the writer

NO

if the statement contradicts the views of the writer

NOT GIVEN

if it is impossible to say what the writer thinks about this

- 21 Alien civilisations may be able to help the human race to overcome serious problems.
- 22 SETI scientists are trying to find a life form that resembles humans in many ways.
- 23 The Americans and Australians have co-operated on joint research projects.
- 24 So far SETI scientists have picked up radio signals from several stars.
- 25 The NASA project attracted criticism from some members of Congress.
- 26 If a signal from outer space is received, it will be important to respond promptly.

READING

READING PASSAGE 1

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

William Henry Perkin

The man who invented synthetic dyes

William Henry Perkin was born on March 12, 1838, in London, England. As a boy, Perkin's curiosity prompted early interests in the arts, sciences, photography, and engineering. But it was a chance stumbling upon a run-down, yet functional, laboratory in his late grandfather's home that solidified the young man's enthusiasm for chemistry.

As a student at the City of London School, Perkin became immersed in the study of chemistry. His talent and devotion to the subject were perceived by his teacher, Thomas Hall, who encouraged him to attend a series of lectures given by the eminent scientist Michael Faraday at the Royal Institution. Those speeches fired the young chemist's enthusiasm further, and he later went on to attend the Royal College of Chemistry, which he succeeded in entering in 1853, at the age of 15.

At the time of Perkin's enrolment, the Royal College of Chemistry was headed by the noted German chemist August Wilhelm Hofmann. Perkin's scientific gifts soon caught Hofmann's attention and within two years, he became Hofmann's youngest assistant. Not long after that, Perkin made the scientific discovery through which they would bring him both fame and fortune.

At the time, quinine was the only viable medical treatment for malaria. The drug is derived from the bark of the cinchona tree, native to South America, and by 1856 demand for the drug was surpassing the available supply. Thus, when Hofmann made some passing comments about the desirability of a synthetic substitute for quinine, it was unsurprising that his star pupil was moved to take up the challenge.

During his vacation in 1856, Perkin spent his time in the laboratory on the top floor of his family's house. He was attempting to manufacture quinine from aniline, an inexpensive and readily available coal tar waste product. Despite his best efforts, however, he did not end up with quinine. Instead, he produced a mysterious dark sludge. Luckily, Perkin's scientific training and nature prompted him to investigate the substance further. Incorporating potassium dichromate and alcohol into the aniline at various stages of the experimental process, he finally produced a deep purple solution. And, proving the truth of the famous scientist Louis Pasteur's words 'chance favours only the prepared mind', Perkin saw the potential of his unexpected and

Historically textile dyes were made from such natural sources as plants and animal excretions. Some of these, such as the glandular mucus of snails, were difficult to obtain and outrageously expensive. Indeed, the purple colour extracted from a snail was once so costly that in society at the time only the rich could afford it. Further, natural dyes tended to be muddy in hue and fade quickly. It was against this backdrop that Perkin's discovery was made.

Perkin quickly grasped that his purple solution could be used to colour fabric, thus making it the world's first synthetic dye. Realising the importance of this breakthrough, he lost no time in patenting it. But perhaps the most fascinating of all Perkin's reactions to his find was his nearly instant recognition that the new dye had commercial possibilities.

Perkin originally named his dye Tyrian Purple, but it later became commonly known as mauve (from the French for the plant used to make the colour violet). He asked advice of Scottish dye works owner Robert Pullar, who assured him that manufacturing the dye would be well worth it if the colour remained fast (i.e. would not fade) and the cost was relatively low. So, over the fierce objections of his mentor Hofmann, he left college to give birth to the modern chemical industry.

With the help of his father and brother, Perkin set up a factory not far from London. Utilising the cheap and plentiful coal tar that was an almost unlimited byproduct of London's gas street lighting, the dye works began producing the world's first synthetically dyed material in 1857. The company received a commercial boost from the Empress Eugénie of France, when she decided the new colour flattered her. Very soon, mauve was the necessary shade for all the fashionable ladies in that country. Not to be outdone, England's Queen Victoria also appeared in public wearing a mauve gown, thus making it all the rage in England as well. The dye was bold and fast, and the public clamoured for more. Perkin went back to the drawing board.

Although Perkin's fame was achieved and fortune assured by his first discovery, the chemist continued his research. Among other dyes he developed and introduced were aniline red (1859) and aniline black (1863) and, in the late 1860s, Perkin's green. It is important to note that Perkin's synthetic dye discoveries had outcomes far beyond the merely decorative. The dyes also became vital to medical research in many ways. For instance, they were used to stain previously invisible microbes and bacteria, allowing researchers to identify such bacilli as tuberculosis, cholera, and anthrax. Artificial dyes continue to play a crucial role today. And, in what would have been particularly pleasing to Perkin, their current use is in the search for a vaccine against malaria.

Questions 1-7

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

In boxes 1-7 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

- 1 Michael Faraday was the first person to recognise Perkin's ability as a student of chemistry.
- 2 Michael Faraday suggested Perkin should enrol in the Royal College of Chemistry.
- 3 Perkin employed August Wilhelm Hofmann as his assistant.
- 4 Perkin was still young when he made the discovery that made him rich and famous.
- 5 The trees from which quinine is derived grow only in South America.
- 6 Perkin hoped to manufacture a drug from a coal tar waste product.
- 7 Perkin was inspired by the discoveries of the famous scientist Louis Pasteur.

Test 1

Questions 8–13

Answer the questions below.

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

Write your answers in boxes 8–13 on your answer sheet.

- 8 Before Perkin's discovery, with what group in society was the colour purple associated?
- 9 What potential did Perkin immediately understand that his new dye had?
- 10 What was the name finally used to refer to the first colour Perkin invented?
- 11 What was the name of the person Perkin consulted before setting up his own dye works?
- 12 In what country did Perkin's newly invented colour first become fashionable?
- 13 According to the passage, which disease is now being targeted by researchers using synthetic dyes?

READING PASSAGE 3

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

The history of the tortoise

If you go back far enough, everything lived in the sea. At various points in evolutionary history, enterprising individuals within many different animal groups moved out onto the land, sometimes even to the most parched deserts, taking their own private seawater with them in blood and cellular fluids. In addition to the reptiles, birds, mammals and insects which we see all around us, other groups that have succeeded out of water include scorpions, snails, crustaceans such as woodlice and land crabs, millipedes and centipedes, spiders and various worms. And we mustn't forget the plants, without whose prior invasion of the land none of the other migrations could have happened.

Moving from water to land involved a major redesign of every aspect of life, including breathing and reproduction. Nevertheless, a good number of thoroughgoing land animals later turned around, abandoned their hard-earned terrestrial re-tooling, and returned to the water again. Seals have only gone part way back. They show us what the intermediates might have been like, on the way to extreme cases such as whales and dugongs. Whales (including the small whales we call dolphins) and dugongs, with their close cousins the manatees, ceased to be land creatures altogether and reverted to the full marine habits of

their remote ancestors. They don't even come ashore to breed. They do, however, still breathe air, having never developed anything equivalent to the gills of their earlier marine incarnation. Turtles went back to the sea a very long time ago and, like all vertebrate returnees to the water, they breathe air. However, they are, in one respect, less fully given back to the water than whales or dugongs, for turtles still lay their eggs on beaches.

There is evidence that all modern turtles are descended from a terrestrial ancestor which lived before most of the dinosaurs. There are two key fossils called *Proganochelys quenstedti* and *Palaeochersis talampayensis* dating from early dinosaur times, which appear to be close to the ancestry of all modern turtles and tortoises. You might wonder how we can tell whether fossil animals lived on land or in water, especially if only fragments are found. Sometimes it's obvious. Ichthyosaurs were reptilian contemporaries of the dinosaurs, with fins and streamlined bodies. The fossils look like dolphins and they surely lived like dolphins, in the water. With turtles it is a little less obvious. One way to tell is by measuring the bones of their forelimbs.

Walter Joyce and Jacques Gauthier, at Yale University, obtained three measurements in these particular bones

Test 1

of 71 species of living turtles and tortoises. They used a kind of triangular graph paper to plot the three measurements against one another. All the land tortoise species formed a tight cluster of points in the upper part of the triangle; all the water turtles cluster in the lower part of the triangular graph. There was no overlap, except when they added some species that spend time both in water and on land. Sure enough, these amphibious species show up on the triangular graph approximately half way between the 'wet cluster' of sea turtles and the 'dry cluster' of land tortoises. The next step was to determine where the fossils fell. The bones of *P. quenstedti* and *P. talampayensis* leave us in no doubt. Their points on the graph are right in the thick of the dry cluster. Both these fossils were dry-land tortoises. They come from the era before our turtles returned to the water.

You might think, therefore, that modern land tortoises have probably stayed on land ever since those early terrestrial times, as most mammals did after a few of them went back to the sea. But apparently

not. If you draw out the family tree of all modern turtles and tortoises, nearly all the branches are aquatic. Today's land tortoises constitute a single branch, deeply nested among branches consisting of aquatic turtles. This suggests that modern land tortoises have not stayed on land continuously since the time of *P. quenstedti* and *P. talampayensis*. Rather, their ancestors were among those who went back to the water, and they then re-emerged back onto the land in (relatively) more recent times.

Tortoises therefore represent a remarkable double return. In common with all mammals, reptiles and birds, their remote ancestors were marine fish and before that various more or less worm-like creatures stretching back, still in the sea, to the primeval bacteria. Later ancestors lived on land and stayed there for a very large number of generations. Later ancestors still evolved back into the water and became sea turtles. And finally they returned yet again to the land as tortoises, some of which now live in the driest of deserts.

Questions 27–30

Answer the questions below.

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

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

- 27 What had to transfer from sea to land before any animals could migrate?
- 28 Which **TWO** processes are mentioned as those in which animals had to make big changes as they moved onto land?
- 29 Which physical feature, possessed by their ancestors, do whales lack?
- 30 Which animals might ichthyosaurs have resembled?

Questions 31–33

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

In boxes 31–33 on your answer sheet, write

TRUE	<i>if the statement agrees with the information</i>
FALSE	<i>if the statement contradicts the information</i>
NOT GIVEN	<i>if there is no information on this</i>

- 31 Turtles were among the first group of animals to migrate back to the sea.
- 32 It is always difficult to determine where an animal lived when its fossilised remains are incomplete.
- 33 The habitat of ichthyosaurs can be determined by the appearance of their fossilised remains.

Questions 34–39

Complete the flow-chart below.

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

Write your answers in boxes 34–39 on your answer sheet.

Method of determining where the ancestors of turtles and tortoises come from

Step 1

71 species of living turtles and tortoises were examined and a total of **34** were taken from the bones of their forelimbs.



Step 2

The data was recorded on a **35** (necessary for comparing the information).

Outcome: Land tortoises were represented by a dense **36** of points towards the top.

Sea turtles were grouped together in the bottom part.



Step 3

The same data was collected from some living **37** species and added to the other results.

Outcome: The points for these species turned out to be positioned about **38** up the triangle between the land tortoises and the sea turtles.



Step 4

Bones of *P. quenstedti* and *P. talampayensis* were examined in a similar way and the results added.

Outcome: The position of the points indicated that both these ancient creatures were **39**

Question 40

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

Write the correct letter in box 40 on your answer sheet.

According to the writer, the most significant thing about tortoises is that

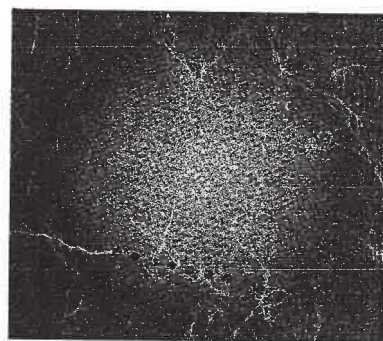
- A** they are able to adapt to life in extremely dry environments.
- B** their original life form was a kind of primeval bacteria.
- C** they have so much in common with sea turtles.
- D** they have made the transition from sea to land more than once.

READING PASSAGE 2

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

Venus in transit

June 2004 saw the first passage, known as a 'transit', of the planet Venus across the face of the Sun in 122 years. Transits have helped shape our view of the whole Universe, as Heather Cooper and Nigel Henbest explain



- A** On 8 June 2004, more than half the population of the world were treated to a rare astronomical event. For over six hours, the planet Venus steadily inched its way over the surface of the Sun. This 'transit' of Venus was the first since 6 December 1882. On that occasion, the American astronomer Professor Simon Newcomb led a party to South Africa to observe the event. They were based at a girls' school, where – it is alleged – the combined forces of three schoolmistresses outperformed the professionals with the accuracy of their observations.
- B** For centuries, transits of Venus have drawn explorers and astronomers alike to the four corners of the globe. And you can put it all down to the extraordinary polymath Edmond Halley. In November 1677, Halley observed a transit of the innermost planet, Mercury, from the desolate island of St Helena in the South Pacific. He realised that, from different latitudes, the passage of the planet across the Sun's disc would appear to differ. By timing the transit from two widely-separated locations, teams of astronomers could calculate the parallax angle – the apparent difference in position of an astronomical body due to a difference in the observer's position. Calculating this angle would allow astronomers to measure what was then the ultimate goal: the distance of the Earth from the Sun. This distance is known as the 'astronomical unit' or AU.
- C** Halley was aware that the AU was one of the most fundamental of all astronomical measurements. Johannes Kepler, in the early 17th century, had shown that the distances of the planets from the Sun governed their orbital speeds, which were easily measurable. But no-one had found a way to calculate accurate distances to the planets from the Earth. The goal was to measure the AU; then, knowing the orbital speeds of all the other planets round the Sun, the scale of the Solar System would fall into place. However, Halley realised that Mercury was so far away that its parallax angle would be very difficult to determine. As Venus was closer to the Earth, its parallax angle would be larger, and Halley worked out that by using Venus it would be possible to measure the

Test 2

Sun's distance to 1 part in 500. But there was a problem: transits of Venus, unlike those of Mercury, are rare, occurring in pairs roughly eight years apart every hundred or so years. Nevertheless, he accurately predicted that Venus would cross the face of the Sun in both 1761 and 1769 – though he didn't survive to see either.

- D** Inspired by Halley's suggestion of a way to pin down the scale of the Solar System, teams of British and French astronomers set out on expeditions to places as diverse as India and Siberia. But things weren't helped by Britain and France being at war. The person who deserves most sympathy is the French astronomer Guillaume Le Gentil. He was thwarted by the fact that the British were besieging his observation site at Pondicherry in India. Fleeing on a French warship crossing the Indian Ocean, Le Gentil saw a wonderful transit – but the ship's pitching and rolling ruled out any attempt at making accurate observations. Undaunted, he remained south of the equator, keeping himself busy by studying the islands of Mauritius and Madagascar before setting off to observe the next transit in the Philippines. Ironically after travelling nearly 50,000 kilometres, his view was clouded out at the last moment, a very dispiriting experience.
- E** While the early transit timings were as precise as instruments would allow, the measurements were dogged by the 'black drop' effect. When Venus begins to cross the Sun's disc, it looks smeared not circular – which makes it difficult to establish timings. This is due to diffraction of light. The second problem is that Venus exhibits a halo of light when it is seen just outside the Sun's disc. While this showed astronomers that Venus was surrounded by a thick layer of gases refracting sunlight around it, both effects made it impossible to obtain accurate timings.
- F** But astronomers laboured hard to analyse the results of these expeditions to observe Venus transits. Johann Franz Encke, Director of the Berlin Observatory, finally determined a value for the AU based on all these parallax measurements: 153,340,000 km. Reasonably accurate for the time, that is quite close to today's value of 149,597,870 km, determined by radar, which has now superseded transits and all other methods in accuracy. The AU is a cosmic measuring rod, and the basis of how we scale the Universe today. The parallax principle can be extended to measure the distances to the stars. If we look at a star in January – when Earth is at one point in its orbit – it will seem to be in a different position from where it appears six months later. Knowing the width of Earth's orbit, the parallax shift lets astronomers calculate the distance.
- G** June 2004's transit of Venus was thus more of an astronomical spectacle than a scientifically important event. But such transits have paved the way for what might prove to be one of the most vital breakthroughs in the cosmos – detecting Earth-sized planets orbiting other stars.

Questions 14–17

Reading Passage 2 has seven paragraphs, **A–G**.

Which paragraph contains the following information?

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

- 14** examples of different ways in which the parallax principle has been applied
- 15** a description of an event which prevented a transit observation
- 16** a statement about potential future discoveries leading on from transit observations
- 17** a description of physical states connected with Venus which early astronomical instruments failed to overcome

Questions 18–21

Look at the following statements (Questions 18–21) and the list of people below.

*Match each statement with the correct person, **A, B, C** or **D**.*

*Write the correct letter, **A, B, C** or **D**, in boxes 18–21 on your answer sheet.*

- 18** He calculated the distance of the Sun from the Earth based on observations of Venus with a fair degree of accuracy.
- 19** He understood that the distance of the Sun from the Earth could be worked out by comparing observations of a transit.
- 20** He realised that the time taken by a planet to go round the Sun depends on its distance from the Sun.
- 21** He witnessed a Venus transit but was unable to make any calculations.

List of People

- A** Edmond Halley
- B** Johannes Kepler
- C** Guillaume Le Gentil
- D** Johann Franz Encke

READING

READING PASSAGE 1

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

- A** Hearing impairment or other auditory function deficit in young children can have a major impact on their development of speech and communication, resulting in a detrimental effect on their ability to learn at school. This is likely to have major consequences for the individual and the population as a whole. The New Zealand Ministry of Health has found from research carried out over two decades that 6–10% of children in that country are affected by hearing loss.
- B** A preliminary study in New Zealand has shown that classroom noise presents a major concern for teachers and pupils. Modern teaching practices, the organisation of desks in the classroom, poor classroom acoustics, and mechanical means of ventilation such as air-conditioning units all contribute to the number of children unable to comprehend the teacher's voice. Education researchers Nelson and Soli have also suggested that recent trends in learning often involve collaborative interaction of multiple minds and tools as much as individual possession of information. This all amounts to heightened activity and noise levels, which have the potential to be particularly serious for children experiencing auditory function deficit. Noise in classrooms can only exacerbate their difficulty in comprehending and processing verbal communication with other children and instructions from the teacher.
- C** Children with auditory function deficit are potentially failing to learn to their maximum potential because of noise levels generated in classrooms. The effects of noise on the ability of children to learn effectively in typical classroom environments are now the subject of increasing concern. The International Institute of Noise Control Engineering (I-INCE), on the advice of the World Health Organization, has established an international working party, which includes New Zealand, to evaluate noise and reverberation control for school rooms.
- D** While the detrimental effects of noise in classroom situations are not limited to children experiencing disability, those with a disability that affects their processing of speech and verbal communication could be extremely vulnerable. The auditory function deficits in question include hearing impairment, autistic spectrum disorders (ASD) and attention deficit disorders (ADD/ADHD).
- E** Autism is considered a neurological and genetic life-long disorder that causes discrepancies in the way information is processed. This disorder is characterised by interlinking problems with social imagination, social communication and social interaction. According to Janzen, this affects the ability to understand and relate in typical ways to people, understand events and objects in the environment, and understand or respond to sensory stimuli. Autism does not allow learning or thinking in the same ways as in children who are developing normally.

Autistic spectrum disorders often result in major difficulties in comprehending verbal information and speech processing. Those experiencing these disorders often find sounds such as crowd noise and the noise generated by machinery painful and distressing. This is difficult to scientifically quantify as such extra-sensory stimuli vary greatly from one autistic individual to another. But a child who finds any type of noise in their classroom or learning space intrusive is likely to be adversely affected in their ability to process information.

- F** The attention deficit disorders are indicative of neurological and genetic disorders and are characterised by difficulties with sustaining attention, effort and persistence, organisation skills and disinhibition. Children experiencing these disorders find it difficult to screen out unimportant information, and focus on everything in the environment rather than attending to a single activity. Background noise in the classroom becomes a major distraction, which can affect their ability to concentrate.
- G** Children experiencing an auditory function deficit can often find speech and communication very difficult to isolate and process when set against high levels of background noise. These levels come from outside activities that penetrate the classroom structure, from teaching activities, and other noise generated inside, which can be exacerbated by room reverberation. Strategies are needed to obtain the optimum classroom construction and perhaps a change in classroom culture and methods of teaching. In particular, the effects of noisy classrooms and activities on those experiencing disabilities in the form of auditory function deficit need thorough investigation. It is probable that many undiagnosed children exist in the education system with 'invisible' disabilities. Their needs are less likely to be met than those of children with known disabilities.
- H** The New Zealand Government has developed a New Zealand Disability Strategy and has embarked on a wide-ranging consultation process. The strategy recognises that people experiencing disability face significant barriers in achieving a full quality of life in areas such as attitude, education, employment and access to services. Objective 3 of the New Zealand Disability Strategy is to 'Provide the Best Education for Disabled People' by improving education so that all children, youth learners and adult learners will have equal opportunities to learn and develop within their already existing local school. For a successful education, the learning environment is vitally significant, so any effort to improve this is likely to be of great benefit to all children, but especially to those with auditory function disabilities.
- I** A number of countries are already in the process of formulating their own standards for the control and reduction of classroom noise. New Zealand will probably follow their example. The literature to date on noise in school rooms appears to focus on the effects on schoolchildren in general, their teachers and the hearing impaired. Only limited attention appears to have been given to those students experiencing the other disabilities involving auditory function deficit. It is imperative that the needs of these children are taken into account in the setting of appropriate international standards to be promulgated in future.

Questions 1–6

Reading Passage 1 has nine sections, A–I.

Which section contains the following information?

Write the correct letter, A–I, in boxes 1–6 on your answer sheet.

- 1 an account of a national policy initiative
- 2 a description of a global team effort
- 3 a hypothesis as to one reason behind the growth in classroom noise
- 4 a demand for suitable worldwide regulations
- 5 a list of medical conditions which place some children more at risk from noise than others
- 6 the estimated proportion of children in New Zealand with auditory problems

Questions 7–10

Answer the questions below.

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

Write your answers in boxes 7–10 on your answer sheet.

- 7 For what period of time has hearing loss in schoolchildren been studied in New Zealand?
- 8 In addition to machinery noise, what other type of noise can upset children with autism?
- 9 What term is used to describe the hearing problems of schoolchildren which have not been diagnosed?
- 10 What part of the New Zealand Disability Strategy aims to give schoolchildren equal opportunity?

Test 2

Questions 11 and 12

Choose **TWO** letters, **A–F**.

Write the correct letters in boxes 11 and 12 on your answer sheet.

The list below includes factors contributing to classroom noise.

Which **TWO** are mentioned by the writer of the passage?

- A** current teaching methods
- B** echoing corridors
- C** cooling systems
- D** large class sizes
- E** loud-voiced teachers
- F** playground games

Question 13

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

Write the correct letter in box 13 on your answer sheet.

What is the writer's overall purpose in writing this article?

- A** to compare different methods of dealing with auditory problems
- B** to provide solutions for overly noisy learning environments
- C** to increase awareness of the situation of children with auditory problems
- D** to promote New Zealand as a model for other countries to follow

Read the text below and answer Questions 22–27.

How to answer any interview question



To start, take a tip from consultants who coach executives on how to handle media interviews. They say you can deliver the message you want to an employer, regardless of the question you're asked.

'Unlike some politicians, who take no notice of press questions and immediately introduce a different topic in response, job candidates must answer employers' queries,' says John Barford of the interview training firm Genesis. 'However, you can quickly make the transition from your answer to the important points you want to convey about your qualifications,' he says.

He advises candidates at job interviews to apply the formula $Q = A + 1$: Q is the question; A is the answer; + is the bridge to the message you want to deliver; and 1 is the point you want to make.

Diligent preparation is also necessary to effectively answer any interview question, say senior executives. They give a number of useful tips:

- Learn as much as you can beforehand. Ask company employees questions prior to job interviews to gain as much insight as you can. If the company is publicly owned, find out how viable it is by reading shareholder reports. You can then tailor what you say to the company's issues.
- Be prepared for questions that require you to show how you handled difficult challenges. These questions require stories in response, but as it's unlikely that you'll have one that fits every situation, try to recall some from your past experience that show how you coped with a range of issues.
- Count on being asked about a past mistake or blemish on your career record, and don't try to dodge the issue. Ms Murphy, president of the Murphy Group, a media interview training firm, says that it's important to steer clear of lies at all costs. Just answer the question and move on.
- When discussing a mistake, focus on the positive outcomes. 'You learn as much by dropping the ball as you do by catching it,' says senior executive Mr Friedmann. When he was being interviewed for his current job, he mentioned he had been involved in many successful turnarounds and one that failed. 'And I said how I'd benefited in many ways from going through that experience,' he says.

General Training: Reading and Writing

Questions 22–27

Complete the sentences below.

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

Write your answers in boxes 22–27 on your answer sheet.

- 22 The writer warns candidates not to imitate the way that ignore questions in Interviews.
- 23 Interviewees are recommended to follow a certain to allow them to communicate their main points.
- 24 Senior executives advise candidates to request information from before an interview.
- 25 A candidate can also learn about a business by studying its
- 26 The head of an interview training firm advises people to avoid telling
- 27 In his job interview, one executive explained how he had considerably from a previous failure.

Read the text below and answer Questions 21–27.

Is Everyone Entitled To Paid Holidays?

The Working Time Regulations (WTRs) introduced a new right to paid holidays for most workers. However, some workers were not covered when the WTRs came into force in October 1998. Since the regulations were amended, with effect from 1 August 2003, the majority of these workers have been entitled to paid holidays, and since 1 August 2004 the regulations have also applied to junior doctors.

Workers who qualify are entitled to no fewer than four weeks of paid holiday a year, and public holidays (normally eight days in England and Wales) count towards this. However, workers and employers can agree longer holidays.

For the first year of work, special accrual rules apply. For each month of employment, workers are entitled to ~~one~~ twelfth of the annual holiday. After the first year of employment, you can take your holiday entitlement at any time, with your employer's approval.

Before taking holidays, you must give your employer notice of at least twice the length of the holiday you want to take: for instance, to take a ~~five-day~~ holiday, you must give at ~~least~~ ten days' notice. If your employer does not want you to take that holiday, they can give you counter-notice equal to the holiday – for example, ~~five~~ days' notice not to take a ~~five-day~~ holiday.

If the employer wants you to take holiday at a given time, e.g. when there is a shutdown at the same time every year, they must give you notice of at least twice the length of the holiday. There is no right for the worker to take that holiday at a different time.

Holiday cannot be carried over to the next year, unless your contract of employment allows this to happen. Nor can you be paid in lieu of your holiday. However, when you leave the job, you are entitled to receive payment for any outstanding holiday, provided your contract specifically allows for this.

It may be that your contract gives you better rights, or your holiday rights might be specified in a collective agreement. Your union representative can advise you on this.

Questions 21–27

Answer the questions below.

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

Write your answers in boxes 21–27 on your answer sheet.

- 21 In what year were the regulations extended to cover most of the workers who were originally excluded?
- 22 What is the minimum annual paid holiday which workers are entitled to?
- 23 During a worker's first year of employment, what proportion of their annual holiday does a month's work give?
- 24 What can an employer give a worker to stop them taking holiday that they have requested?
- 25 What is given as a possible reason for an employee having to take a holiday at a certain time?
- 26 When an employee leaves their job, what should be given in place of any holiday they have not taken?
- 27 Apart from a contract, what type of document may set out an employee's holiday rights?

SECTION 2 Questions 15-27

Read the text below and answer Questions 15-20.

Kenichi Software: security guidelines for staff

General

It is in everyone's interest to maintain a high level of security in the workplace. You should immediately challenge any person who appears to be on the premises without proper authorisation, or inform a senior member of staff about any odd or unusual activity.

Company Property

You are advised that it is within the company's legal rights to detain any person on the grounds that they may be involved in the unauthorised removal of company property. The company reserves the right to search staff members leaving or entering the premises and to inspect any article or motor vehicle on company property. It is a condition of employment that you submit to such action if requested.

It is in your own interest to ensure that you have proper authority before removing any item of company property from a company building. Any member found removing company property from the building without proper authority will be subject to disciplinary action.

Identity Badges

You will be issued with an identity badge, which should be worn at all times when you are on company premises. The purpose of these badges is to safeguard our security. Badges are issued by Human Resources, and contractors and people visiting the company on a one-off basis are also obliged to wear

Confidential Matters

In the course of your work you may have access to information relating to the company's business, or that of a supplier or customer. Such material, even where it appears comparatively trivial, can have a serious effect on the company, supplier or customer if it falls into the wrong hands. It is, therefore, essential that you should at all times be aware of the serious view the company would take of disclosure of such material to outsiders.

You must treat as confidential all information, data, specifications, drawings and all documents relating to the company's business and/or its trading activities, and not divulge, use, or employ them except in the company's service. Before you leave the company, you must hand over to your manager all private notes relevant to the company's business, activities, prices, accounts, costs etc. Legal proceedings may be initiated for any misuse or unauthorised disclosure of such confidential information, whether during employment or afterwards.

Questions 15-20

Complete the sentences below.

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

Write your answers in boxes 15-20 on your answer sheet.

- 15 If you see anything suspicious, you should report it to a employee.
- 16 If the company wants to stop you and you, you have to agree to it.
- 17 If you take things belonging to the company without permission, you will face
- 18 Staff, and visitors must all wear a badge on company premises.
- 19 You must not pass on confidential information to
- 20 If you leave the company, you have to hand in any you have made on matters concerning the company.

Read the text below and answer Questions 21–27.

How to deal with the annual performance appraisal

The annual performance appraisal can help improve your productivity and provide a foundation for your work priorities. It is, however, critical to have the right attitude and approach. Knowing what areas your superiors see as your weaknesses is the most direct way of increasing the likelihood of being considered for promotion, if that is what you are looking for.

Preparation

Send your boss a summary of your achievements. Reminding your boss of activities, special assignments you did, and projects you were in charge of helps him or her create a more accurate performance appraisal. Consider keeping notes of these on a regular basis to make it easier to provide the data when required.

Create a list of questions you would like to discuss during your appraisal. This one-on-one time with your boss is an excellent opportunity to ask him or her about your role in the company, request any additional responsibilities you would like and clarify your priorities. But it is best to focus your attention around personal and professional improvements, rather than financial considerations, such as an increase in salary.

During the appraisal

Present a positive attitude as soon as you enter the appraisal room. This approach may lead to a more constructive discussion of review items. Avoid taking any negative assessments that are offered as a personal attack, but rather try to take them on board calmly, because if you put the failings right you will improve your performance. A realistic assessment of your strengths and weaknesses can be one of the most beneficial ways of helping you advance in the company.

After the appraisal

Create a list of personal goals based on your performance appraisal. Make the items detailed and measurable if possible. Send this list to your boss so he or she knows you took the appraisal seriously. Use this list to help achieve higher scores on your next performance appraisal. Six months after the appraisal, ask for a mid-term review with your boss to discuss your progress. This session should be more relaxed and informal than the official review. Ask for more feedback to help you improve. Checking in with your boss helps him or her remember your dedication as far as your job is concerned, and may help remove any criticisms before they become a review point on your next formal appraisal.

Questions 21-27

Complete the sentences below.

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

Write your answers in boxes 21-27 on your answer sheet.

- 21 By learning at an appraisal what areas of work need improving, staff can improve their chances of getting
- 22 It is important to think of some that can be used during the appraisal.
- 23 The appraisal can be a good time to ask the boss for extra
- 24 React ~~by~~ to any criticism.
- 25 It is helpful to identify a number of individual arising from the appraisal comments.
- 26 Staff can request a meeting half-way through the year to look at the which has been achieved.
- 27 If staff act on any appraisal comments, they will demonstrate their to their work.

Read the text below and answer Questions 22–27.

Hilton Laboratory Health and safety in the workplace

Personal safety

You must be familiar with the emergency procedures in your building so that you know what to do in the event of fire, spillages or other accidents. Do not enter restricted areas without authorisation, and at all times observe the warnings given. Do not wedge open fire doors or tamper with door closures, and do not block doorways, corridors or stairs, as obstructions may affect access in the event of a fire. Avoid leaving drawers and doors open unnecessarily and do not trail cables or flexes across the floor.

How to dispose of rubbish safely

We aim to protect the environment by saving and recycling glass, waste paper, and an increasing range of other materials. It is important to check materials carefully for contamination before placing them in recycling containers. Never put sharp objects such as razor blades or broken glass into waste bins without having wrapped the items carefully to protect those emptying the bins. Other waste procedures may vary – contact your Building Manager or Divisional Safety Officer for advice with regard to your particular department.

How to handle heavy objects

Make sure that shelves are not overloaded and that glass and heavy objects are stored at working height where they will be easier to reach. Use steps or ladders to reach items at height; never climb on benches, tables or chairs. Never move anything that is beyond your capability. Wherever possible you should use the trolleys provided in the workplace to do the job for you. If repetitive manual operations are routine in your work, your department will ensure you receive appropriate instruction on safe working practices and posture.

Staying alert

If you become mentally or physically tired during the working day, and find that you're feeling drowsy or not concentrating properly, you could be at risk of causing an accident or making a mistake that could harm you or your colleagues. To prevent this, make sure that you take regular breaks when necessary.

Test 1

Questions 22–27

Complete the sentences below.

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

Write your answers in boxes 22–27 on your answer sheet.

- 22 There are certain places in the building that staff should avoid unless they have
- 23 To ensure people can get out easily, it is important that there are no to exits.
- 24 Items which could cause injury must be before they are disposed of.
- 25 Not all departments have the same system for dealing with so you need to check before throwing things away.
- 26 are available to make tasks which require moving objects easier.
- 27 You should have while you are working.

IELTS Reading Question Types: Information & Tips

In IELTS Reading, there are different types of questions that you can be given. These questions are always divided into different types of questions which you must complete. Each passage usually has about 3 or 4 different types of questions to answer.

1. ANSWER -TRUE, FALSE, NOT GIVEN

1. Passage - The majority of people who graduated university found it difficult to get a job.

Question - After finishing their tertiary education all people had difficulties to find employment

2. Passage - The charity raises money for education and the daily needs of poor people

Question - The charity spends more of the money raised on schooling for poor people than on their daily requirements

3. Passage - Just over 400 million acres of land is being used for agriculture in America

Question - At present, in America about 400 million acres of land is allocated for agriculture.

4. Passage - By the second half of the 17th century, coffee had found its way to Europe.

Question - Coffee arrived in Europe after the 17th century

A. Spam Text Messages in China

SPAM, as every user of mobile phones in China is aware to their intense annoyance, is a roaring business in China. Its delivery-men drive through residential neighborhoods in "text-messaging cars", with illegal but easy-to-buy gadgetry they use to hijack links between mobile-phone users and nearby communications masts. They then target the numbers they harvest, blasting them with spam text messages before driving away. Mobile-phone users usually see only the wearisome results: another sprinkling of spam messages offering deals on flats, investment advice and dodgy receipts for tax purposes.

Chinese mobile-users get more spam text messages than their counterparts almost anywhere else in the world. They received more than 300 billion of them in 2013, or close to one a day for each person using a mobile phone. Users in bigger markets like Beijing and Shanghai receive two a day, or more than 700 annually, accounting for perhaps one-fifth to one-third of all texts. Americans, by comparison, received an estimated 4.5 billion junk messages in 2011, or fewer than 20 per mobile-user for the year—out of a total of more than two trillion text messages sent.

In China, by contrast, the three largest mobile operators sell special numbers that start with the digits 106. These are exempt from rules limiting the number of messages that can be sent daily by a normal account. Regulators allow them to be used for non-commercial purposes, such as by companies to send messages to staff. But Tencent Mobile Security Lab, a software-security firm, found last year that 55% of mobile spam reported by users came from 106 numbers. After a documentary last year on these accounts by Chinese state television, China Mobile, one of the biggest carriers, admitted there were "loopholes and inadequacies" and said it would work to "hold people accountable". The broadcaster estimated that the big three carriers earned hundreds of millions of dollars a year from spam text messages.

Questions 1-6. Decide if the following questions are true, false or not given.

1. The men delivering spam text messages in China use technology which is illegal and cannot be bought readily.
2. Customer numbers are accessed by hacking into users phones.
3. Mobile phone owners in Beijing and Shanghai received over 700 spam texts in a year.
4. America received 4.5 billion junk texts which was the least amount worldwide in 2001.
5. Over half of all reported junk texts were sent from 106 numbers according to Tencent Mobile Security Lab.
6. The three largest mobile operators make large amounts of money from junk text messaging.

B. Origins of Bread

Bread is the most widely consumed food in the world. Not only is it an important source of carbohydrates, it's also small and easy to carry, which helps to explain why it has been part of our diet for thousands of years. In fact, recent scholarship suggests humans started baking bread at least 30,000 years ago.

Prehistoric man had already been making gruel from water and grains, so it was a small jump to starting cooking this mixture into a solid bread form by frying it on stones. A 2010 study by the National Academy of Sciences discovered traces of starch (likely from the roots of cattails and ferns) in prehistoric mortar and pestle-like rocks. The roots would have been peeled and dried before they were ground into flour and mixed with water. Finally, the paste would be cooked on heated rocks.

Question 1-4 Which of the following statements are true, false or not given?

1. Bread is eaten in all countries in the world.
2. Bread contains carbohydrates.
3. The first bread was made about 30,000 years ago.
4. Bread was first made from gruel cooked in clay pots.

C. How the Pyramids were Built

The pyramid blocks were hewn from quarries using stone and copper tools. There are examples of each stage of block extraction at existing ancient quarries. Granite was quarried using pounding stones of dolerite, some of which have been found laying about the quarries. The blocks were transported to the pyramid site from remote quarries using barges, and from local quarries using wooden sleds. The Egyptians did not use the wheel during the Pyramid Age, an invention that would have been of limited use on softer ground under heavy loads. The sleds were dragged manually, sometimes with the help of beasts of burden, over smoothed roads. Some of the existing pathways were equipped with transverse wooden beams to lend support to the sled. A lubricant may have been poured upon the road to reduce friction.

There is an open debate as to whether the pyramids were built by the Egyptians.

How the massive blocks were raised to the height of the rising pyramid is not understood for certain. Earthen ramps were used at least in the initial stages of construction. Extant ramps have been found at the pyramids of Amenemhat I and Senwosret I at Lisht as well as at several other sites. Traces of disassembled ramps at pyramid sites are even more common. The ramps were made of brick or earth and rubble dressed with brick for strength. They were built up as the pyramid progressed upward, and removed as the pyramid was finished downward.

The ramps likely took the form of an inclined plane at the beginning of work, but the configuration in later stages has long been a matter of conjecture. Some Egyptologists propose a straight, gently sloping, linear ramp, some propose a steep staircase ramp, and others propose a ramp that spiraled up the four sides of the pyramid. In most ramp scenarios, the volume of the ramp exceeds the volume of the pyramid structure itself, raising the possibility that the stones of the upper reaches were placed using levers, or perhaps a modified ramp of some sort.

But whatever the configuration of the ramps, the fact remains that the Egyptians successfully completed the most massive building projects in all of history. There is nothing magical or supernatural in the means by which they achieved their goals. By all indications, they retained their knowledge of construction throughout their history, but they were limited after the Fourth Dynasty not by the lack of technology but rather by the lack of the abundant resources that were previously available. More than two thousand years later, the Romans would move huge stones, some weighing nearly 1,000 tons, using similar techniques at Baalbek.

More impressive than the mechanics of moving huge masses of building material are the logistics involved: choreographing teams of foremen, multitudes of workers, and a profusion of supplies, all within the rigid constraints of a blueprint for design and a timetable for completion. It is hard to imagine that such a feat could be possible, but the pyramids themselves provide mute testimony that it was not only possible but actually accomplished. There remains no known written record hinting at how the pyramids were built, nor have any reliefs depicting the procedure been found. Most of what Egyptologists believe to be true of the methods involved is based on tangible archaeological evidence. Some is based on theory and is open for debate. What is known for certain is that the Egyptians used simple but effective tools to quarry the stones, to move them to the pyramid site, and to place them in the desired location.

Questions 1-10 Decide if the statements below are Yes No or Not Given

1. The wheel, although not invented at that time, would have aided the pyramid builders.
2. It is possible that Ancient Egyptians could have lubricated their roads to aid transportation.
3. The building of roads dates back to the pre-dynastic period of Ancient Egypt.
4. The method of construction used for pyramid building has still not been confirmed completely.
5. Ramps made from earth are believed to have been used at the outset of building.
6. Egyptologists agree that ramps were built straight similar to a staircase.
7. The building work of the Ancient Egyptians is unrivaled.
8. The knowledge of large pyramid building died out by the fourth dynasty.
9. Some reliefs show how the pyramids were constructed.
10. There is an open debate as to whether the pyramids were built by the Egyptians.

2. Matching Headings Questions

Practice matching headings with the article below. You will see there are two paragraphs but 6 possible headings. Read the headings first and then read the article to decide which heading is the right one for each paragraph. Choose the correct heading for paragraphs A & B from the list of headings below.

- | | | | |
|------|---------------------------|-----|----------------------------------|
| i. | Temperatures on earth | iv. | Plants that grow in a greenhouse |
| ii. | What is a greenhouse | v. | Earth's atmosphere |
| iii. | How is earth a greenhouse | vi. | Why people have greenhouses |

A. The greenhouse effect

A: A greenhouse is a house made of glass. It has glass walls and a glass roof. People grow tomatoes and flowers and other plants in them. A greenhouse stays warm inside, even during winter. Sunlight shines in and warms the plants and air inside. But the heat is trapped by the glass and cannot escape. So during the daylight hours, it gets warmer and warmer inside a greenhouse, and stays quite warm at night too.

B. Earth's atmosphere does the same thing as the greenhouse. Gases in the atmosphere such as carbon dioxide do what the roof of a greenhouse does. During the day, the Sun shines through the atmosphere. Earth's surface warms up in the sunlight. At night, Earth's surface cools, releasing the heat back into the air. But some of the heat is trapped by the greenhouse gases in the atmosphere. That is what keeps our Earth a warm and comfortable 59 degrees Fahrenheit, on average.

B. Antimicrobial Resistance

A) While antibiotic resistance refers specifically to the resistance to antibiotics that occurs in common bacteria that cause infections, antimicrobial resistance is a broader term, encompassing resistance to drugs to treat infections caused by other microbes. Antimicrobial resistance (AMR) is resistance of a microorganism to an antimicrobial drug that was originally effective for treatment of infections caused by it. Resistant microorganisms (including bacteria, fungi, viruses and parasites) are able to withstand attack by antimicrobial drugs, such as antibacterial drugs (e.g., antibiotics), antifungals, antivirals, and antimalarials, so that standard treatments become ineffective and infections persist, increasing the risk of spread to others. The evolution of resistant strains is a natural phenomenon that occurs when microorganisms replicate themselves erroneously or when resistant traits are exchanged between them. The misuse of antimicrobial drugs accelerates the emergence of drug-resistant strains. Poor infection control practices, inadequate sanitary conditions and inappropriate food-handling encourages the further spread of AMR.

B) New resistance mechanisms emerge and spread worldwide threatening our ability to treat common infectious diseases, resulting in death and disability of individuals who until recently could continue a normal course of life. Without effective anti-infective treatment, many standard medical treatments will fail or turn into very high cost procedures. This would be a financially draining situation for wealthier countries but for the poorer ones, it could have catastrophic effects.

C) Infections caused by resistant microorganisms often fail to respond to the standard treatment, resulting in prolonged illness, higher health care expenditures, and a greater risk of death. As an example, the death rate for patients with serious infections caused by common bacteria treated in hospitals can be about twice that of patients with infections caused by the same non-resistant bacteria. For example, people with MRSA (another common source of severe infections in the community and in hospitals) are estimated to be 64% more likely to die than people with a non-resistant form of the infection.

D) WHO's report on global surveillance of antimicrobial resistance reveals that antibiotic resistance is no longer a prediction for the future; it is happening right now, across the world, and is putting at risk the ability to treat common infections in the community and hospitals. Without urgent, coordinated action, the world is heading towards a post-antibiotic era, in which common infections and minor injuries, which have been treatable for decades, can once again kill.

Questions 1-4. Choose the correct heading from the list below (i-x). Choose the correct heading for sections A-D from the list of headings below.

- | | |
|----------------------------------|------------------------------------|
| i. A fatal threat | iv. MRSA in hospitals |
| ii. A global concern. | v. The present situation |
| iii. The evolution of resistance | vi. What is microbial resistance? |
| | vii. Protecting future generations |
-
- | | |
|----------------|----------------|
| 1. Section A - | 2. Section B - |
| 3. Section C - | 4. Section D - |

3. Sentence Completion Questions

A. Water Pollution

Clean and plentiful water provides the foundation for prosperous communities. We rely on clean water to survive, yet right now we are heading towards a water crisis. Changing climate patterns are threatening lakes and rivers, and key sources that we tap for drinking water are being overdrawn or tainted with pollution. NRDC experts are helping to secure safe and sufficient water for people and the environment by:

- Promoting water efficiency strategies to help decrease the amount of water wasted;
- Protecting our water from pollution by defending the Clean Water Act and advocating for solutions like green infrastructure;
- Helping prepare cities, counties and states for water-related challenges they will face as a result of climate change; and
- Ensuring that waterways have enough water to support vibrant aquatic ecosystems.

Complete the sentences below with the correct word(s) taken from the passage. Use no more than three words and/or a number.

- The keystone to any thriving society is to have water.
- It can be said that a is currently imminent.
- One way to help keep water clean is by the construction of
- Polluted water can be a as chemicals and other pollutants enter the water supply.
- Drinking water can become contaminated because of the deficiency in

Dirty water is the world's biggest health risk, and continues to threaten both quality of life and public health in the United States. When water from rain and melting snow runs off roofs and roads into our rivers, it picks up toxic chemicals, dirt, trash and disease-carrying organisms along the way. Many of our water resources also lack basic protection, making them vulnerable to pollution from factory farms, industrial plants, and activities like fracking. This can lead to drinking water contamination, habitat degradation and beach closures. NRDC is working to protect our water from pollution by:

- Drawing on existing protections in the Clean Water Act, and working to ensure that the law's pollution control programs apply to all important waterways, including headwater streams and wetlands, which provide drinking water for 117 million Americans;
- Improving protections to reduce pollutants like bacteria and viruses, which threaten Americans' health and well-being; and
- Establishing new pollution limits for top problem areas, such as sources of runoff and sewage overflows.

Questions 1-5. Complete the sentences below with the correct word(s) taken from the passage. Use no more than three words and/or a number.

1. The keystone to any thriving society is to have water.
2. With the increase in water pollution a is imminent.
3. One way to help keep water clean is by the construction of
4. Polluted water can be a as chemicals and other pollutants enter the water supply.
5. Drinking water can become contaminated because of the deficiency in

B. The War on Smoking

Make no mistake, the move to introduce plain packaging is just the latest front in the war against smoking. Over the past decade, there has been a ban on smoking in public places and moves to restrict displays in shops. But one of the issues that has been concerning health experts and ministers is the number of people who continue to take up smoking, particularly young people.

More than 200,000 under-16s start in the UK each year – helping ensure a viable market remains for manufacturers once the number of people quitting and dying is taken into account. In countries like the UK where there is a ban on advertising, the pack remains the last major vehicle for promotion. Hence the detail and care taken in the design of the packets with their laminated and special print effects, foil decorations and slide openings and bevelled edges. It should come as no surprise therefore to learn that they have become known as the “silent salesman” and “mobile billboard” within the industry. They are that important.

Questions 1-4. Complete the sentences. Choose no more than two words and / or a number from the passage for each answer.

1. The most recent development in the war against smoking is to establish
2. The large number of new smokers, particularly under 16's, makes certain that cigarette companies will always have a
3. In some countries, packaging is the only method that cigarette companies have for
4. Packets are seen as being the in the cigarette industry.

4. Matching Paragraph Information Questions

A. Hobbies for the Elderly

A. Card making – This has become an increasingly popular hobby, as it's very easy to start and cards can be as simple or complicated as skills allow. Best of all, it's a lovely way for your parent to send wishes to all the family and friends.

B. Art – this can be done at your parent's home, or in a local art class. It can be painting, drawing, sculpture, or pottery. It does not matter how skilled your parent is, as there are opportunities for all levels. Just give it a go. The creative process is very absorbing and rewarding and it is a great way for your elderly relative to meet new people.

C. Learning to use the internet – if your aging parent likes the look of new technology, but has never learned how to use it, the internet is very easy once someone has shown them how. It opens up a whole new world of information and they will be able to keep in touch easily with children and grandchildren via email.

Questions 1-2. Which section contains the following information? Write the correct letter (A-C) as your answer.

1. A way to learn new methods of communication.
2. A way to socialize.

5. Summary Completion Question

A. Fermented Foods

Fermentation is a process in which an agent [typically bacteria and yeast] cause an organic substance to break down into simpler substances; especially, the anaerobic [no oxygen] breakdown of sugar into alcohol, i.e. the making of beer or wine. Fermentation in food processing is the conversion of carbohydrates (plant foods) to alcohols and carbon dioxide, or organic acids, using yeasts, bacteria, or a combination thereof, under anaerobic (no oxygen) conditions.

Fermentation usually implies that the action of microorganisms is desirable, and the process is used to produce alcoholic beverages such as wine, beer, and cider. Fermentation is also employed in the leavening of bread, and for preservation techniques to create lactic acid in sour foods such as sauerkraut, dry sausages, kimchi and yogurt, or vinegar (acetic acid) for use in pickling foods.

Nobel Prize winner Dr. Elie Metchnikoff was one of the first scientists to recognize the benefits of eating fermented foods. His research in the early 1900's focused on the Bulgarians. He believed the daily ingestion of yogurt was a major contribution to their superior health and longevity.

Bulgarians perfected the art of detoxifying and preserving milk (removing the lactose and predigesting the proteins) and transforming it into yogurt and cheese. For centuries, Europeans used wine as a source of clean, durable water. The Caucasians used Kefir grains for the same purpose: detoxify milk products to make Kefir. Vegetables were also fermented to preserve them from spoilage, such as kimchi in Korea. Most of the pickled products found on our grocery shelves were at one time a fermented product: pickles, sauerkraut, and even catsup (a Chinese word for pickled fish brine). However, since fermentation isn't always a uniform process, manufacturers found another way to make these products.

Questions 1-6. Complete the summary using the list of words (A-J) below.

International Uses for Fermentation

At the start of the 20th century, Dr. Elie Metchnikoff put forward his belief that the 1. and good health of Bulgarians could be attributed to eating fermented food each day. By 2. and preserving milk, they were able to convert it into 3. and 4. In other parts of Europe, fermented 5. was consumed as a replacement for clean water. Some 6., were fermented which gave them a longer lifespan which nowadays is done by pickling.

A) ingesting B) yoghurt C) longevity D) pickled products E) wine F) food G) kimchi H) cheese I) detoxifying J) vegetables

6. Multiple choice questions

A. GM Food

Genetically modified food is produced from plants which have had their genes tweaked in the lab. Scientists "cut and paste" a gene from another organism into a plant's DNA to give it a new characteristic. This can be to increase yield or to allow the plant to exist in a more hostile environment than normal. Pro-GM scientists say this means cheaper more plentiful food but opponents argue we do not know the consequences of meddling with nature. Qs

Farmers have modified their crops for thousands of years by crossing similar species. However, modern GM is controversial. Critics say the modified crops could "escape" and cross with wild plants, with unknown consequences. They also argue that more chemicals are used on some GM fields which may have a negative impact on wildlife. And while no study has found GM food to be harmful to humans, opponents say it is too soon to be sure.

A group of biotechnology experts say it is time to loosen Europe's draconian regulations on genetically modified crops. In a report released today they argue that genetically modified crops have been used safely for decades, so no longer need to be automatically treated as unsafe. They also say that genetically modified crops should be reclaimed from multinational companies and treated as a public good.

Questions 1-5. Choose the best answer A-C.

1. The genetic make-up of GM foods has been.....
a) twisted. b) altered. c) cut.
2. By genetically engineering plants, they are.....
a) likely to increase in size. b) able to produce more. c) not able to exist in difficult conditions.
3. One issue with GM plants is the potential to.....
a) breakout causing undetermined consequences.
b) infect wild plants with unknown results.
c) cross pollinate.
4. It is thought, by specialists in biotechnology that policies governing GM crops should be.....
a) tightened. b) relaxed. c) reviewed.
5. GM foods ought to be
a) reclaimed for the use of multinational companies
b) used safely
c) no longer be privatised

B. First Test to Predict Alzheimer's

The world's first blood test to predict Alzheimer's disease before symptoms occur has been developed. The test identifies 10 chemicals in the blood associated with the disease two to three years before symptoms start, but it might be able to predict Alzheimer's decades earlier.

Globally, 35 million people are living with Alzheimer's. It is characterised by a toxic build up of amyloid and tau proteins in the brain, which destroys the neurons. Several blood tests can diagnose the disease, but until now, none has had the sensitivity to predict its onset.

But with no treatments available, would anyone want to take these tests? Mapstone says "In my experience, the majority of people are very interested to know whether they will get Alzheimer's. They believe that knowledge is power - particularly when it comes to your own health. We may not have any therapy yet but there are things we can do - we can get our financial and legal affairs in order, plan for future care, and inform family members."

Questions 1 – 3. Choose the correct letter A-C

1. The test can predict Alzheimer's.....

- a) two or three years before the illness begin
- b) two or three years from the start of the symptoms
- c) a decade before

2. This test is the first blood test which can

- a) cure Alzheimer's
- b) estimate the start of the disease
- c) diagnose the disease

3. Mapstone believes that

- a) this test will help people understand Alzheimer's
- b) people want to know about their health
- c) people want power

7. Choosing a Title

A. Reading

Babies learn to see over a period of time, much like they learn to walk and talk. They are not born with all the visual abilities they need in life. The ability to focus their eyes, move them accurately, and use them together as a team must be learned. Also, they need to learn how to use the visual information the eyes send to their brain in order to understand the world around them and interact with it appropriately.

From birth, babies begin exploring the wonders in the world with their eyes. Even before they learn to reach and grab with their hands or crawl and sit-up, their eyes are providing information and stimulation important for their development. Healthy eyes and good vision play a critical role in how infants and children learn to see.

Babies as young as 2 to 3 months have shown that they have some form of depth perception. One method researchers have used to study babies and depth perception is through using a "visual cliff." A visual cliff consists of a glass platform that is raised a few feet off the floor. One half of the cliff has a shallow side, where there is a checkerboard pattern directly underneath the glass. The "deep end" of the cliff shows the pattern several feet below, creating the impression of a drop-off. Researchers found that infants as young as 2 months showed changes in heart rate when lowered face down over the shallow and deep ends of the visual cliff. Specifically, the infants' heart rates decreased when they were lowered over the deep end, and were unchanged when over the shallow end. Note that this experiment does not show that infants this young are afraid of the deep side. Usually, a decrease in heart rate indicates interest, while fear leads to an increase in heart rate. The experimental differences in heart rate indicate that the infants could perceive a difference between the deep and shallow ends of the visual cliff.

Question 1. Choose the best title for this passage from the titles below (A-D)

- A. The development of perception in humans
- B. The development of depth perception

The importance of vision in babies

D. Babies fear of visual cliffs

B. Reading

Coffee is one of the most popular hot drinks in the world. Almost a third of the world's population drinks coffee. People often meet at cafes or coffee shops for a coffee break during the middle of the morning or stop work in the afternoon to drink coffee.

About 7 million tons of coffee is produced every year. Brazil is, by far, the world's largest coffee producer. About a third of the world's production comes from this South American country. Other coffee producing countries include Vietnam, Indonesia and Columbia.

The United States is the biggest coffee consumer in the world. About 1.2 billion kilograms of coffee are consumed there every year. Drinking coffee is extremely popular in European countries, like Italy, France and Germany, as well as in Brazil.

Question. Choose the correct letter A – C

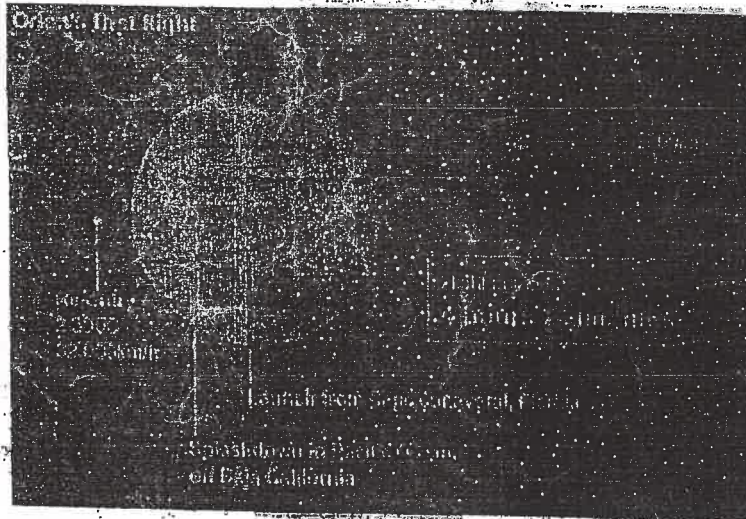
Which is the best title for the passage below?

- A. Coffee – a popular hot drink
- C. Coffee – the main producers

B. Coffee – the main consumers

8. Matching Sentence Endings

A. NASA's Orion 'Mars Ship' set for test flight



→ 5,800KM.

→ Flight duration.

A US space capsule that could help get humans to Mars is about to make its maiden flight. Orion will be launched on a Delta rocket out of Cape Canaveral in Florida on a short journey above the Earth to test key technologies. The conical vessel is reminiscent of the Apollo command ships that took men to the Moon in the 1960s and 1970s, but bigger and with cutting-edge systems. Given that this is a first outing, there will be no people aboard.

Nonetheless, the US space agency describes the demonstration as a major event. Nasa has a window in which to launch Orion of about two-and-a-half hours, which began at 07:05 local time (12:05 GMT). The launch preparations had to be

stopped shortly before the opening of the window because a boat strayed into the eastern part of the launch range. After that, the countdown had to be held because of strong winds and a technical issue.

Orion is being developed alongside a powerful new rocket that will have its own debut in 2017 or 2018. Together, they will form the core capabilities needed to send humans beyond the International Space Station to destinations such as the Red Planet. For Thursday's flight, the Delta IV-Heavy rocket – currently the beefiest launcher in the world – is being used as a stand-in. It will send Orion twice around the globe, throwing the ship up to an altitude of almost 6,000km (3,600 miles). This will set up a fast fall back to Earth, with a re-entry speed into the atmosphere close to 30,000km/h (20,000mph) – near what would be expected of a capsule coming back from the Moon. It should give engineers the opportunity to check the performance of Orion's critical heat shield, which is likely to experience temperatures in excess of 2,000C (4,000F). They will also watch how the parachutes deploy as they gently lower the capsule into Pacific waters off Mexico's Baja California Peninsula. (Passage from BBC News)

Questions 1-4. Complete the sentences by selecting the correct ending, A-G (not all letters will be used).

1. The first ever flight of Orion is aimed to
 2. Although the shape of Orion is similar to previous ships, it
 3. A new rocket is also being developed which
 4. The rocket which will be used as a replacement will
 5. As temperatures reach extreme levels on re-entry, this maiden flight will
- | | |
|---------------------------------------|---|
| a. send Orion twice around the world. | e. test the most important technology. |
| b. has state of the art technology. | f. will have its first voyage in a few years. |
| c. test the critical heat shield. | g. help humans get to Mars |
| d. check Orion's performance. | |

9. Short Answer Questions

A. The History of Easter Eggs

Easter eggs, also called Paschal eggs, are special eggs that are often given to celebrate Easter or springtime. The practice of decorating eggshell is ancient. Ostrich eggs with engraved decoration that are 60,000 years old have been found in Africa. In Europe, it was traditional to use dyed and painted chicken eggs at Easter, but a modern custom is to substitute chocolate eggs, or plastic eggs filled with confectionery such as jelly beans. Easter eggs are a widely popular symbol of new life in Bulgaria, Poland, Romania, Russia, Ukraine, and other Central European countries where they are concealed in the garden for children to find. Eggs, in general, were a traditional symbol of fertility and rebirth. Some magic rituals, these days, often use eggs to promote fertility and restore virility (of the body and mind); and to foresee the future.

Questions 1-3. Answer the questions below. Choose no more than two words from the passage for each answer.

1. What is another name for an Easter Egg
2. What type of eggs were used at Easter?
3. What did eggs represent on the whole?

94

READING

READING PASSAGE 1

You should spend about 20 minutes on **Questions 1–13**, which are based on Reading Passage 1.

Questions 1–7

Reading Passage 1 has seven paragraphs, **A–G**.

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

Write the correct number, **i–viii**, in boxes 1–7 on your answer sheet.

List of Headings

- i** The importance of getting the timing right
- ii** Young meets old
- iii** Developments to the disadvantage of tortoise populations
- iv** Planning a bigger idea
- v** Tortoises populate the islands
- vi** Carrying out a carefully prepared operation
- vii** Looking for a home for the islands' tortoises
- viii** The start of the conservation project

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

Flying tortoises

An airborne reintroduction programme has helped conservationists take significant steps to protect the endangered Galápagos tortoise.

- A** Forests of spiny cacti cover much of the uneven lava plains that separate the interior of the Galápagos island of Isabela from the Pacific Ocean. With its five distinct volcanoes, the island resembles a lunar landscape. Only the thick vegetation at the skirt of the often cloud-covered peak of Sierra Negra offers respite from the barren terrain below. This inhospitable environment is home to the giant Galápagos tortoise. Some time after the Galápagos's birth, around five million years ago, the islands were colonised by one or more tortoises from mainland South America. As these ancestral tortoises settled on the individual islands, the different populations adapted to their unique environments, giving rise to at least 14 different subspecies. Island life agreed with them. In the absence of significant predators, they grew to become the largest and longest-living tortoises on the planet, weighing more than 400 kilograms, occasionally exceeding 1.8 metres in length and living for more than a century.
- B** Before human arrival, the archipelago's tortoises numbered in the hundreds of thousands. From the 17th century onwards, pirates took a few on board for food, but the arrival of whaling ships in the 1790s saw this exploitation grow exponentially. Relatively immobile and capable of surviving for months without food or water, the tortoises were taken on board these ships to act as food supplies during long ocean passages. Sometimes, their bodies were processed into high-grade oil. In total, an estimated 200,000 animals were taken from the archipelago before the 20th century. This historical exploitation was then exacerbated when settlers came to the islands. They hunted the tortoises and destroyed their habitat to clear land for agriculture. They also introduced alien species – ranging from cattle, pigs, goats, rats and dogs to plants and ants – that either prey on the eggs and young tortoises or damage or destroy their habitat.
- C** Today, only 11 of the original subspecies survive and of these, several are highly endangered. In 1989, work began on a tortoise-breeding centre just outside the town of Puerto Villamil on Isabela, dedicated to protecting the island's tortoise populations. The centre's captive-breeding programme proved to be extremely successful, and it eventually had to deal with an overpopulation problem.
- D** The problem was also a pressing one. Captive-bred tortoises can't be reintroduced into the wild until they're at least five years old and weigh at least 4.5 kilograms, at which point their size and weight – and their hardened shells – are sufficient to protect them from predators. But if people wait too long after that point, the tortoises eventually become too large to transport.

- E** For years, repatriation efforts were carried out in small numbers, with the tortoises carried on the backs of men over weeks of long, treacherous hikes along narrow trails. But in November 2010, the environmentalist and Galápagos National Park liaison officer Godfrey Merlin, a visiting private motor yacht captain and a helicopter pilot gathered around a table in a small café in Puerto Ayora on the island of Santa Cruz to work out more ambitious reintroduction. The aim was to use a helicopter to move 300 of the breeding centre's tortoises to various locations close to Sierra Negra.
- F** This unprecedented effort was made possible by the owners of the 67-metre yacht *White Cloud*, who provided the Galápagos National Park with free use of their helicopter and its experienced pilot, as well as the logistical support of the yacht, its captain and crew. Originally an air ambulance, the yacht's helicopter has a rear double door and a large internal space that's well suited for cargo, so a custom crate was designed to hold up to 33 tortoises with a total weight of about 150 kilograms. This weight, together with that of the fuel, pilot and four crew, approached the helicopter's maximum payload, and there were times when it was clearly right on the edge of the helicopter's capabilities. During a period of three days, a group of volunteers from the breeding centre worked around the clock to prepare the young tortoises for transport. Meanwhile, park wardens, dropped off ahead of time in remote locations, cleared landing sites within the thick brush, cacti and lava rocks.
- G** Upon their release, the juvenile tortoises quickly spread out over their ancestral territory, investigating their new surroundings and feeding on the vegetation. Eventually, one tiny tortoise came across a fully grown giant who had been lumbering around the island for around a hundred years. The two stood side by side, a powerful symbol of the regeneration of an ancient species.

Test 7

Questions 8–13

Complete the notes below.

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

Write your answers in boxes 8–13 on your answer sheet.

The decline of the Galápagos tortoise

- Originally from mainland South America
- Numbers on Galápagos islands increased, due to lack of predators
- 17th century: small numbers taken onto ships used by **8**
- 1790s: very large numbers taken onto whaling ships, kept for **9**
and also used to produce **10**
- Hunted by **11** on the islands
- Habitat destruction: for the establishment of agriculture and by various
12 not native to the islands, which also fed on baby tortoises and
tortoises' **13**

READING PASSAGE 2

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

The Intersection of Health Sciences and Geography

- A** While many diseases that affect humans have been eradicated due to improvements in vaccinations and the availability of healthcare, there are still areas around the world where certain health issues are more prevalent. In a world that is far more globalised than ever before, people come into contact with one another through travel and living closer and closer to each other. As a result, super-viruses and other infections resistant to antibiotics are becoming more and more common.
- B** Geography can often play a very large role in the health concerns of certain populations. For instance, depending on where you live, you will not have the same health concerns as someone who lives in a different geographical region. Perhaps one of the most obvious examples of this idea is malaria-prone areas, which are usually tropical regions that foster a warm and damp environment in which the mosquitos that can give people this disease can grow. Malaria is much less of a problem in high-altitude deserts, for instance.
- C** In some countries, geographical factors influence the health and well-being of the population in very obvious ways. In many large cities, the wind is not strong enough to clear the air of the massive amounts of smog and pollution that cause asthma, lung problems, eyesight issues and more in the people who live there. Part of the problem is, of course, the massive number of cars being driven, in addition to factories that run on coal power. The rapid industrialisation of some countries in recent years has also led to the cutting down of forests to allow for the expansion of big cities, which makes it even harder to fight the pollution with the fresh air that is produced by plants.
- D** It is in situations like these that the field of health geography comes into its own. It is an increasingly important area of study in a world where diseases like polio are re-emerging, respiratory diseases continue to spread, and malaria-prone areas are still fighting to find a better cure. Health geography is the combination of, on the one hand, knowledge regarding geography and methods used to analyse and interpret geographical information, and on the other, the study of health, diseases and healthcare practices around the world. The aim of this hybrid science is to create solutions for common geography-based health problems. While people will always be prone to illness, the study of how geography affects our health could lead to the eradication of certain illnesses, and the prevention of others in the future. By understanding why and how we get sick, we can change the way we treat illness and disease specific to certain geographical locations.

Test 7

- E** The geography of disease and ill health analyses the frequency with which certain diseases appear in different parts of the world, and overlays the data with the geography of the region, to see if there could be a correlation between the two. Health geographers also study factors that could make certain individuals or a population more likely to be taken ill with a specific health concern or disease, as compared with the population of another area. Health geographers in this field are usually trained as healthcare workers, and have an understanding of basic epidemiology as it relates to the spread of diseases among the population.
- F** Researchers study the interactions between humans and their environment that could lead to illness (such as asthma in places with high levels of pollution) and work to create a clear way of categorising illnesses, diseases and epidemics into local and global scales. Health geographers can map the spread of illnesses and attempt to identify the reasons behind an increase or decrease in illnesses, as they work to find a way to halt the further spread or re-emergence of diseases in vulnerable populations.
- G** The second subcategory of health geography is the geography of healthcare provision. This group studies the availability (or lack thereof) of healthcare resources to individuals and populations around the world. In both developed and developing nations there is often a very large discrepancy between the options available to people in different social classes, income brackets, and levels of education. Individuals working in the area of the geography of healthcare provision attempt to assess the levels of healthcare in the area (for instance, it may be very difficult for people to get medical attention because there is a mountain between their village and the nearest hospital). These researchers are on the frontline of making recommendations regarding policy to international organisations, local government bodies and others.
- H** The field of health geography is often overlooked, but it constitutes a huge area of need in the fields of geography and healthcare. If we can understand how geography affects our health no matter where in the world we are located, we can better treat disease, prevent illness, and keep people safe and well.

Questions 14–19

Reading Passage 2 has eight sections, **A–H**.

Which paragraph contains the following information?

Write the correct letter, **A–H**, in boxes 14–19 on your answer sheet.

NB You may use any letter more than once.

- 14 an acceptance that not all diseases can be totally eliminated
- 15 examples of physical conditions caused by human behaviour
- 16 a reference to classifying diseases on the basis of how far they extend geographically
- 17 reasons why the level of access to healthcare can vary within a country
- 18 a description of health geography as a mixture of different academic fields
- 19 a description of the type of area where a particular illness is rare

Questions 20–26

Complete the sentences below.

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

- 20 Certain diseases have disappeared, thanks to better and healthcare.
- 21 Because there is more contact between people, are losing their usefulness.
- 22 Disease-causing are most likely to be found in hot, damp regions.
- 23 One cause of pollution is that burn a particular fuel.
- 24 The growth of cities often has an impact on nearby
- 25 is one disease that is growing after having been eradicated.
- 26 A physical barrier such as a can prevent people from reaching a hospital.

Test 7

READING PASSAGE 3

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

Music and the emotions

Neuroscientist Jonah Lehrer considers the emotional power of music

Why does music make us feel? On the one hand, music is a purely abstract art form, devoid of language or explicit ideas. And yet, even though music says little, it still manages to touch us deeply. When listening to our favourite songs, our body betrays all the symptoms of emotional arousal. The pupils in our eyes dilate, our pulse and blood pressure rise, the electrical conductance of our skin is lowered, and the cerebellum, a brain region associated with bodily movement, becomes strangely active. Blood is even re-directed to the muscles in our legs. In other words, sound stirs us at our biological roots.

A recent paper in *Nature Neuroscience* by a research team in Montreal, Canada, marks an important step in revealing the precise underpinnings of 'the potent pleasurable stimulus' that is music. Although the study involves plenty of fancy technology, including functional magnetic resonance imaging (fMRI) and ligand-based positron emission tomography (PET) scanning, the experiment itself was rather straightforward. After screening 217 individuals who responded to advertisements requesting people who experience 'chills' to instrumental music, the scientists narrowed down the subject pool to ten. They then asked the subjects to bring in their playlist of favourite songs – virtually every genre was represented, from techno to tango – and played them the music while their brain activity was monitored. Because the scientists were combining methodologies (PET and fMRI), they were able to obtain an impressively exact and detailed portrait of music in the brain. The first thing they discovered is that music triggers the production of dopamine – a chemical with a key role in setting people's moods – by the neurons (nerve cells) in both the dorsal and ventral regions of the brain. As these two regions have long been linked with the experience of pleasure, this finding isn't particularly surprising.

What is rather more significant is the finding that the dopamine neurons in the caudate – a region of the brain involved in learning stimulus-response associations, and in anticipating food and other 'reward' stimuli – were at their most active around 15 seconds before the participants' favourite moments in the music. The researchers call this the 'anticipatory phase' and argue that the purpose of this activity is to help us predict the arrival of our favourite part. The question, of course, is what all these dopamine neurons are up to. Why are they so active in the period *preceding* the acoustic climax? After all, we typically associate surges of dopamine with pleasure, with the processing of *actual* rewards. And yet, this cluster of cells is most active when the 'chills' have yet to arrive, when the melodic pattern is still unresolved.

One way to answer the question is to look at the music and not the neurons. While music can often seem (at least to the outsider) like a labyrinth of intricate patterns, it turns out that the most important part of every song or symphony is when the patterns break down, when the sound becomes unpredictable. If the music is too obvious, it is annoyingly boring, like an alarm clock. Numerous studies, after all, have demonstrated that dopamine neurons quickly adapt to predictable rewards. If we know what's going to happen next, then we don't get excited. This is why composers often introduce a key note in the beginning of a song, spend most of the rest of the piece in the studious avoidance of the pattern, and then finally repeat it only at the end. The longer we are denied the pattern we expect, the greater the emotional release when the pattern returns, safe and sound.

To demonstrate this psychological principle, the musicologist Leonard Meyer, in his classic book *Emotion and Meaning in Music* (1956), analysed the 5th movement of Beethoven's String Quartet in C-sharp minor, Op. 131. Meyer wanted to show how music is defined by its flirtation with – but not submission to – our expectations of order. Meyer dissected 50 measures (bars) of the masterpiece, showing how Beethoven begins with the clear statement of a rhythmic and harmonic pattern and then, in an ingenious tonal dance, carefully holds off repeating it. What Beethoven does instead is suggest variations of the pattern. He wants to preserve an element of uncertainty in his music, making our brains beg for the one chord he refuses to give us. Beethoven saves that chord for the end.

According to Meyer, it is the suspenseful tension of music, arising out of our unfulfilled expectations, that is the source of the music's feeling. While earlier theories of music focused on the way a sound can refer to the real world of images and experiences – its 'connotative' meaning – Meyer argued that the emotions we find in music come from the unfolding events of the music itself. This 'embodied meaning' arises from the patterns the symphony invokes and then ignores. It is this uncertainty that triggers the surge of dopamine in the caudate, as we struggle to figure out what will happen next. We can predict some of the notes, but we can't predict them all, and that is what keeps us listening, waiting expectantly for our reward, for the pattern to be completed.

Test 7

Questions 27–31

Complete the summary below.

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

Write your answers in boxes 27–31 on your answer sheet.

The Montreal Study

Participants, who were recruited for the study through advertisements, had their brain activity monitored while listening to their favourite music. It was noted that the music stimulated the brain's neurons to release a substance called **27** in two of the parts of the brain which are associated with feeling **28**

Researchers also observed that the neurons in the area of the brain called the **29** were particularly active just before the participants' favourite moments in the music – the period known as the **30** Activity in this part of the brain is associated with the expectation of 'reward' stimuli such as **31**

Questions 32–36

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

Write the correct letter in boxes 32–36 on your answer sheet.

- 32 What point does the writer emphasise in the first paragraph?
- A how dramatically our reactions to music can vary
 - B how intense our physical responses to music can be
 - C how little we know about the way that music affects us
 - D how much music can tell us about how our brains operate
- 33 What view of the Montreal study does the writer express in the second paragraph?
- A Its aims were innovative.
 - B The approach was too simplistic.
 - C It produced some remarkably precise data.
 - D The technology used was unnecessarily complex.
- 34 What does the writer find interesting about the results of the Montreal study?
- A the timing of participants' neural responses to the music
 - B the impact of the music on participants' emotional state
 - C the section of participants' brains which was activated by the music
 - D the type of music which had the strongest effect on participants' brains
- 35 Why does the writer refer to Meyer's work on music and emotion?
- A to propose an original theory about the subject
 - B to offer support for the findings of the Montreal study
 - C to recommend the need for further research into the subject
 - D to present a view which opposes that of the Montreal researchers
- 36 According to Leonard Meyer, what causes the listener's emotional response to music?
- A the way that the music evokes poignant memories in the listener
 - B the association of certain musical chords with certain feelings
 - C the listener's sympathy with the composer's intentions
 - D the internal structure of the musical composition

Test 7

Questions 37–40

Complete each sentence with the correct ending, **A–F**, below.

Write the correct letter, **A–F**, in boxes 37–40 on your answer sheet.

- 37 The Montreal researchers discovered that
- 38 Many studies have demonstrated that
- 39 Meyer's analysis of Beethoven's music shows that
- 40 Earlier theories of music suggested that

- A** our response to music depends on our initial emotional state.
- B** neuron activity decreases if outcomes become predictable.
- C** emotive music can bring to mind actual pictures and events.
- D** experiences in our past can influence our emotional reaction to music.
- E** emotive music delays giving listeners what they expect to hear.
- F** neuron activity increases prior to key points in a musical piece.

READING**READING PASSAGE 1**

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

Bringing cinnamon to Europe

Cinnamon is a sweet, fragrant spice produced from the inner bark of trees of the genus *Cinnamomum*, which is native to the Indian sub-continent. It was known in biblical times, and is mentioned in several books of the Bible, both as an ingredient that was mixed with oils for anointing people's bodies, and also as a token indicating friendship among lovers and friends. In ancient Rome, mourners attending funerals burnt cinnamon to create a pleasant scent. Most often, however, the spice found its primary use as an additive to food and drink. In the Middle Ages, Europeans who could afford the spice used it to flavour food, particularly meat, and to impress those around them with their ability to purchase an expensive condiment from the 'exotic' East. At a banquet, a host would offer guests a plate with various spices piled upon it as a sign of the wealth at his or her disposal. Cinnamon was also reported to have health benefits, and was thought to cure various ailments, such as indigestion.

Toward the end of the Middle Ages, the European middle classes began to desire the lifestyle of the elite, including their consumption of spices. This led to a growth in demand for cinnamon and other spices. At that time, cinnamon was transported by Arab merchants, who closely guarded the secret of the source of the spice from potential rivals. They took it from India, where it was grown, on camels via an overland route to the Mediterranean. Their journey ended when they reached Alexandria. European traders sailed there to purchase their supply of cinnamon, then brought it back to Venice. The spice then travelled from that great trading city to markets all around Europe. Because the overland trade route allowed for only small quantities of the spice to reach Europe, and because Venice had a virtual monopoly of the trade, the Venetians could set the price of cinnamon exorbitantly high. These prices, coupled with the increasing demand, spurred the search for new routes to Asia by Europeans eager to take part in the spice trade.

Seeking the high profits promised by the cinnamon market, Portuguese traders arrived on the island of Ceylon in the Indian Ocean toward the end of the 15th century. Before Europeans arrived on the island, the state had organized the cultivation of cinnamon. People belonging to the ethnic group called the Salagama would peel the bark off young shoots of the cinnamon plant in the rainy season, when the wet bark was more pliable. During the peeling process, they curled the bark into the 'stick' shape still associated with the spice today. The Salagama then gave the finished product to the king as a form of tribute. When the Portuguese arrived, they needed to increase

production significantly, and so enslaved many other members of the Ceylonese native population, forcing them to work in cinnamon harvesting. In 1518, the Portuguese built a fort on Ceylon, which enabled them to protect the island, so helping them to develop a monopoly in the cinnamon trade and generate very high profits. In the late 16th century, for example, they enjoyed a tenfold profit when shipping cinnamon over a journey of eight days from Ceylon to India.

When the Dutch arrived off the coast of southern Asia at the very beginning of the 17th century, they set their sights on displacing the Portuguese as kings of cinnamon. The Dutch allied themselves with Kandy, an inland kingdom on Ceylon. In return for payments of elephants and cinnamon, they protected the native king from the Portuguese. By 1640, the Dutch broke the 150-year Portuguese monopoly when they overran and occupied their factories. By 1658, they had permanently expelled the Portuguese from the island, thereby gaining control of the lucrative cinnamon trade.

In order to protect their hold on the market, the Dutch, like the Portuguese before them, treated the native inhabitants harshly. Because of the need to boost production and satisfy Europe's ever-increasing appetite for cinnamon, the Dutch began to alter the harvesting practices of the Ceylonese. Over time, the supply of cinnamon trees on the island became nearly exhausted, due to systematic stripping of the bark. Eventually, the Dutch began cultivating their own cinnamon trees to supplement the diminishing number of wild trees available for use.

Then, in 1796, the English arrived on Ceylon, thereby displacing the Dutch from their control of the cinnamon monopoly. By the middle of the 19th century, production of cinnamon reached 1,000 tons a year, after a lower grade quality of the spice became acceptable to European tastes. By that time, cinnamon was being grown in other parts of the Indian Ocean region and in the West Indies, Brazil, and Guyana. Not only was a monopoly of cinnamon becoming impossible, but the spice trade overall was diminishing in economic potential, and was eventually superseded by the rise of trade in coffee, tea, chocolate, and sugar.

Questions 1–9

Complete the notes below.

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

Write your answers in boxes 1–9 on your answer sheet.

The Early History of Cinnamon

Biblical times: added to 1
used to show 2 between people

Ancient Rome: used for its sweet smell at 3

Middle Ages: added to food, especially meat
was an indication of a person's 4
known as a treatment for 5 and other
health problems
grown in 6
merchants used 7 to bring it to
the Mediterranean
arrived in the Mediterranean at 8
traders took it to 9 and sold it to
destinations around Europe

Questions

Questions 10-13

that they

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

Exercises -

For questions 10-13 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

- 10 The Portuguese had control over the cinnamon trade in Ceylon throughout the 16th century.
- 11 The Dutch took over the cinnamon trade from the Portuguese as soon as they arrived in Ceylon.
- 12 The trees planted by the Dutch produced larger quantities of cinnamon than the wild trees.
- 13 The spice trade maintained its economic importance during the 19th century.

NO.

(10)

(11)

(12)

(13)

READING PASSAGE 2

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

Oxytocin

The positive and negative effects of the chemical known as the 'love hormone'

- A Oxytocin is a chemical, a hormone produced in the pituitary gland in the brain. It was through various studies focusing on animals that scientists first became aware of the influence of oxytocin. They discovered that it helps reinforce the bonds between prairie voles, which mate for life, and triggers the motherly behaviour that sheep show towards their newborn lambs. It is also released by women in childbirth, strengthening the attachment between mother and baby. Few chemicals have as positive a reputation as oxytocin, which is sometimes referred to as the 'love hormone'. One sniff of it can, it is claimed, make a person more trusting, empathetic, generous and cooperative. It is time, however, to revise this wholly optimistic view. A new wave of studies has shown that its effects vary greatly depending on the person and the circumstances, and it can impact on our social interactions for worse as well as for better.
- B Oxytocin's role in human behaviour first emerged in 2005. In a groundbreaking experiment, Markus Heinrichs and his colleagues at the University of Freiburg, Germany, asked volunteers to do an activity in which they could invest money with an anonymous person who was not guaranteed to be honest. The team found that participants who had sniffed oxytocin via a nasal spray beforehand invested more money than those who received a placebo instead. The study was the start of research into the effects of oxytocin on human interactions. 'For eight years, it was quite a lonesome field,' Heinrichs recalls. 'Now, everyone is interested.' These follow-up studies have shown that after a sniff of the hormone, people become more charitable, better at reading emotions on others' faces and at communicating constructively in arguments. Together, the results fuelled the view that oxytocin universally enhanced the positive aspects of our social nature.
- C Then, after a few years, contrasting findings began to emerge. Simone Shamay-Tsoory at the University of Haifa, Israel, found that when volunteers played a competitive game, those who inhaled the hormone showed more pleasure when they beat other players, and felt more envy when others won. What's more, administering oxytocin also has sharply contrasting outcomes depending on a person's disposition. Jennifer Bartz from Mount Sinai School of Medicine, New York, found that it improves people's ability to read emotions, but only if they are not very socially adept to begin with. Her research also shows that oxytocin in fact reduces cooperation in subjects who are particularly anxious or sensitive to rejection.

Another discovery is that oxytocin's effects vary depending on who we are interacting with. Studies conducted by Carolyn DeClerck of the University of Antwerp, Belgium, revealed that people who had received a dose of oxytocin actually became less cooperative when dealing with complete strangers. Meanwhile, Carsten De Dreu at the University of Amsterdam in the Netherlands discovered that volunteers given oxytocin showed favouritism: Dutch men became quicker to associate positive words with Dutch names than with foreign ones for example. According to De Dreu, oxytocin drives people to care for those in their social circles and defend them from outside dangers. So, it appears that oxytocin strengthens biases, rather than promoting general goodwill, as was previously thought.

There were signs of these subtleties from the start. Bartz has recently shown that in almost half of the existing research results, oxytocin influenced only certain individuals or in certain circumstances. Where once researchers took no notice of such findings, now a more nuanced understanding of oxytocin's effects is propelling investigations down new lines. To Bartz, the key to understanding what the hormone does lies in pinpointing its core function rather than in cataloguing its seemingly endless effects. There are several hypotheses which are not mutually exclusive. Oxytocin could help to reduce anxiety and fear. Or it could simply motivate people to seek out social connections. She believes that oxytocin acts as a chemical spotlight that shines on social clues – a shift in posture, a flicker of the eyes, a dip in the voice – making people more attuned to their social environment. This would explain why it makes us more likely to look others in the eye and improves our ability to identify emotions. But it could also make things worse for people who are overly sensitive or prone to interpreting social cues in the worst light.

Perhaps we should not be surprised that the oxytocin story has become more perplexing. The hormone is found in everything from octopuses to sheep, and its evolutionary roots stretch back half a billion years. 'It's a very simple and ancient molecule that has been co-opted for many different functions,' says Sue Carter at the University of Illinois, Chicago, USA. 'It affects primitive parts of the brain like the amygdala, so it's going to have many effects on just about everything.' Bartz agrees. 'Oxytocin probably does some very basic things, but once you add our higher-order thinking and social situations, these basic processes could manifest in different ways depending on individual differences and context.'

Questions 14–17

Reading Passage 2 has six paragraphs, A–F.

Which paragraph contains the following information?

Write the correct letter, A–F, in boxes 14–17 on your answer sheet.

NB You may use any letter more than once.

- 14 reference to research showing the beneficial effects of oxytocin on people
- 15 reasons why the effects of oxytocin are complex
- 16 mention of a period in which oxytocin attracted little scientific attention
- 17 reference to people ignoring certain aspects of their research data

Questions 18–20

Look at the following research findings (Questions 18–20) and the list of researchers below.

Match each research finding with the correct researcher, A–F.

Write the correct letter, A–F, in boxes 18–20 on your answer sheet.

- 18 People are more trusting when affected by oxytocin.
- 19 Oxytocin increases people's feelings of jealousy.
- 20 The effect of oxytocin varies from one type of person to another.

List of Researchers	
A	Markus Heinrichs
B	Simone Shamay-Tsoory
C	Jennifer Bartz
D	Carolyn DeClerck
E	Carsten De Dreu
F	Sue Carter

Questions 21–26

Complete the summary below.

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

Write your answers in boxes 21–26 on your answer sheet.

Oxytocin research

The earliest findings about oxytocin and bonding came from research involving 21 It was also discovered that humans produce oxytocin during 22 An experiment in 2005, in which participants were given either oxytocin or a 23 reinforced the belief that the hormone had a positive effect.

However, later research suggests that this is not always the case. A study at the University of Haifa where participants took part in a 24 revealed the negative emotions which oxytocin can trigger. A study at the University of Antwerp showed people's lack of willingness to help 25 while under the influence of oxytocin. Meanwhile, research at the University of Amsterdam revealed that people who have been given oxytocin consider 26 that are familiar to them in their own country to have more positive associations than those from other cultures.

READING PASSAGE 3

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

MAKING THE MOST OF TRENDS

Experts from Harvard Business School give advice to managers

Most managers can identify the major trends of the day. But in the course of conducting research in a number of industries and working directly with companies, we have discovered that managers often fail to recognize the less obvious but profound ways these trends are influencing consumers' aspirations, attitudes, and behaviors. This is especially true of trends that managers view as peripheral to their core markets.

Many ignore trends in their innovation strategies or adopt a wait-and-see approach and let competitors take the lead. At a minimum, such responses mean missed profit opportunities. At the extreme, they can jeopardize a company by ceding to rivals the opportunity to transform the industry. The purpose of this article is twofold: to spur managers to think more expansively about how trends could engender new value propositions in their core markets, and to provide some high-level advice on how to make market research and product development personnel more adept at analyzing and exploiting trends.

One strategy, known as 'infuse and augment', is to design a product or service that retains most of the attributes and functions of existing products in the category but adds others that address the needs and desires unleashed by a major trend. A case in point is the Poppy range of handbags, which the firm Coach created in response to the economic downturn of 2008. The Coach brand had been a symbol of opulence and luxury for nearly 70 years, and the most obvious reaction to the downturn would have been to lower prices. However, that would have risked cheapening the brand's image. Instead, they initiated a consumer-research project which revealed that customers were eager to lift themselves and the country out of tough times. Using these insights, Coach launched the lower-priced Poppy handbags, which were in vibrant colors, and looked more youthful and playful than conventional Coach products. Creating the sub-brand allowed Coach to avert an across-the-board price cut. In contrast to the many companies that responded to the recession by cutting prices, Coach saw the new consumer mindset as an opportunity for innovation and renewal.

A further example of this strategy was supermarket Tesco's response to consumers' growing concerns about the environment. With that in mind, Tesco, one of the world's top five retailers, introduced its Greener Living program, which demonstrates the company's commitment to protecting the environment by involving consumers in ways that produce tangible results. For example, Tesco customers can accumulate points for such activities as reusing bags, recycling cans and printer cartridges, and buying home-insulation materials. Like points earned on regular purchases, these green points can be redeemed for cash. Tesco has not abandoned its traditional retail offerings but augmented its business with these innovations, thereby infusing its value proposition with a green streak.

A more radical strategy is 'combine and transcend'. This entails combining aspects of the product's existing value proposition with attributes addressing changes arising from a trend, to create a novel experience – one that may land the company in an entirely new market space. At first glance, spending resources to incorporate elements of a seemingly irrelevant trend into one's core offerings sounds like it's hardly worthwhile. But consider Nike's move to integrate the digital revolution into its reputation for high-performance athletic footwear. In 2006, they teamed up with technology company Apple to launch Nike+, a digital sports kit comprising a sensor that attaches to the running shoe and a wireless receiver that connects to the user's iPod. By combining Nike's original value proposition for amateur athletes with one for digital consumers, the Nike+ sports kit and web interface moved the company from a focus on athletic apparel to a new plane of engagement with its customers.

A third approach, known as 'counteract and reaffirm', involves developing products or services that stress the values traditionally associated with the category in ways that allow consumers to oppose – or at least temporarily escape from – the aspects of trends they view as undesirable. A product that accomplished this is the ME2, a video game created by Canada's iToys. By reaffirming the toy category's association with physical play, the ME2 counteracted some of the widely perceived negative impacts of digital gaming devices. Like other handheld games, the device featured a host of exciting interactive games, a full-color LCD screen, and advanced 3D graphics. What set it apart was that it incorporated the traditional physical component of children's play: it contained a pedometer, which tracked and awarded points for physical activity (walking, running, biking, skateboarding, climbing stairs). The child could use the points to enhance various virtual skills needed for the video game. The ME2, introduced in mid-2008, catered to kids' huge desire to play video games while countering the negatives, such as associations with lack of exercise and obesity.

Once you have gained perspective on how trend-related changes in consumer opinions and behaviors impact on your category, you can determine which of our three innovation strategies to pursue. When your category's basic value proposition continues to be meaningful for consumers influenced by the trend, the infuse-and-augment strategy will allow you to reinvigorate the category. If analysis reveals an increasing disparity between your category and consumers' new focus, your innovations need to transcend the category to integrate the two worlds. Finally, if aspects of the category clash with undesired outcomes of a trend, such as associations with unhealthy lifestyles, there is an opportunity to counteract those changes by reaffirming the core values of your category.

Trends – technological, economic, environmental, social, or political – that affect how people perceive the world around them and shape what they expect from products and services present firms with unique opportunities for growth.

Test 2

Questions 27–31

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

Write the correct letter in boxes 27–31 on your answer sheet.

- 27 In the first paragraph, the writer says that most managers
- A fail to spot the key consumer trends of the moment.
 - B make the mistake of focusing only on the principal consumer trends.
 - C misinterpret market research data relating to current consumer trends.
 - D are unaware of the significant impact that trends have on consumers' lives.
- 28 According to the third paragraph, Coach was anxious to
- A follow what some of its competitors were doing.
 - B maintain its prices throughout its range.
 - C safeguard its reputation as a manufacturer of luxury goods.
 - D modify the entire look of its brand to suit the economic climate.
- 29 What point is made about Tesco's Greener Living programme?
- A It did not require Tesco to modify its core business activities.
 - B It succeeded in attracting a more eco-conscious clientele.
 - C Its main aim was to raise consumers' awareness of environmental issues.
 - D It was not the first time that Tesco had implemented such an initiative.
- 30 What does the writer suggest about Nike's strategy?
- A It was an extremely risky strategy at the time.
 - B It was a strategy that only a major company could afford to follow.
 - C It was the type of strategy that would not have been possible in the past.
 - D It was the kind of strategy which might appear to have few obvious benefits.
- 31 What was original about the ME2?
- A It contained technology that had been developed for the sports industry.
 - B It appealed to young people who were keen to improve their physical fitness.
 - C It took advantage of a current trend for video games with colourful 3D graphics.
 - D It was a handheld game that addressed people's concerns about unhealthy lifestyles.

Question:-
Questions 32-37

Look-

Read the following statements (Questions 32-37) and the list of companies below.

catch.

Match each statement with the correct company, A, B, C or D.

Write.

Write the correct letter, A, B, C or D, in boxes 32-37 on your answer sheet.

You may use any letter more than once.

Q.No:- 2

It turned the notion that its products could have harmful effects to its own advantage. (32)

It extended its offering by collaborating with another manufacturer. (33)

It implemented an incentive scheme to demonstrate its corporate social responsibility. (34)

It discovered that customers had a positive attitude towards dealing with difficult circumstances. (35)

It responded to a growing lifestyle trend in an unrelated product sector. (36)

It successfully avoided having to charge its customers less for its core products. (37)

List of companies

A Coach

B Tesco

C Nike

D iToys

READING**READING PASSAGE 1**

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

Case Study: Tourism New Zealand website

New Zealand is a small country of four million inhabitants, a long-haul flight from all the major tourist-generating markets of the world. Tourism currently makes up 9% of the country's gross domestic product, and is the country's largest export sector. Unlike other export sectors, which make products and then sell them overseas, tourism brings its customers to New Zealand. The product is the country itself – the people, the places and the experiences. In 1999, Tourism New Zealand launched a campaign to communicate a new brand position to the world. The campaign focused on New Zealand's scenic beauty, exhilarating outdoor activities and authentic Maori culture, and it made New Zealand one of the strongest national brands in the world.

A key feature of the campaign was the website www.newzealand.com, which provided potential visitors to New Zealand with a single gateway to everything the destination had to offer. The heart of the website was a database of tourism services operators, both those based in New Zealand and those based abroad which offered tourism services to the country. Any tourism-related business could be listed by filling in a simple form. This meant that even the smallest bed and breakfast address or specialist activity provider could gain a web presence with access to an audience of long-haul visitors. In addition, because participating businesses were able to update the details they gave on a regular basis, the information provided remained accurate. And to maintain and improve standards, Tourism New Zealand organised a scheme whereby organisations appearing on the website underwent an independent evaluation against a set of agreed national standards of quality. As part of this, the effect of each business on the environment was considered.

To communicate the New Zealand experience, the site also carried features relating to famous people and places. One of the most popular was an interview with former New Zealand All Blacks rugby captain Tana Umaga. Another feature that attracted a lot of attention was an interactive journey through a number of the locations chosen for blockbuster films which had made use of New Zealand's stunning scenery as a backdrop. As the site developed, additional features were added to help independent travellers devise their own customised itineraries. To make it easier to plan motoring holidays, the site catalogued the most popular driving routes in the country, highlighting different routes according to the season and indicating distances and times.

Later, a Travel Planner feature was added, which allowed visitors to click and bookmark places or attractions they were interested in, and then view the results on a map. The Travel Planner offered suggested routes and public transport options between the chosen locations. There were also links to accommodation in the area. By registering with the website, users could save their Travel Plan and return to it later, or print it out to take on the visit. The website also had a 'Your Words' section where anyone could submit a blog of their New Zealand travels for possible inclusion on the website.

The Tourism New Zealand website won two Webby awards for online achievement and innovation. More importantly perhaps, the growth of tourism to New Zealand was impressive. Overall tourism expenditure increased by an average of 6.9% per year between 1999 and 2004. From Britain, visits to New Zealand grew at an average annual rate of 13% between 2002 and 2006, compared to a rate of 4% overall for British visits abroad.

The website was set up to allow both individuals and travel organisations to create itineraries and travel packages to suit their own needs and interests. On the website, visitors can search for activities not solely by geographical location, but also by the particular nature of the activity. This is important as research shows that activities are the key driver of visitor satisfaction, contributing 74% to visitor satisfaction, while transport and accommodation account for the remaining 26%. The more activities that visitors undertake, the more satisfied they will be. It has also been found that visitors enjoy cultural activities most when they are interactive, such as visiting a *marae* (meeting ground) to learn about traditional Maori life. Many long-haul travellers enjoy such learning experiences, which provide them with stories to take home to their friends and family. In addition, it appears that visitors to New Zealand don't want to be 'one of the crowd' and find activities that involve only a few people more special and meaningful.

It could be argued that New Zealand is not a typical destination. New Zealand is a small country with a visitor economy composed mainly of small businesses. It is generally perceived as a safe English-speaking country with a reliable transport infrastructure. Because of the long-haul flight, most visitors stay for longer (average 20 days) and want to see as much of the country as possible on what is often seen as a once-in-a-lifetime visit. However, the underlying lessons apply anywhere – the effectiveness of a strong brand, a strategy based on unique experiences and a comprehensive and user-friendly website.

Test 1

Questions 1-7

Complete the table below

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

Write your answers in boxes 1-7 on your answer sheet.

Section of website	Comments
Database of tourism services	<ul style="list-style-type: none"> • easy for tourism-related businesses to get on the list • allowed businesses to 1 information regularly • provided a country-wide evaluation of businesses, including their impact on the 2
Special features on local topics	<ul style="list-style-type: none"> • e.g. an interview with a former sports 3 and an interactive tour of various locations used in 4
Information on driving routes	<ul style="list-style-type: none"> • varied depending on the 5
Travel Planner	<ul style="list-style-type: none"> • included a map showing selected places, details of public transport and local 6
'Your Words'	<ul style="list-style-type: none"> • travellers could send a link to their 7

Questions 8–13

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

In boxes 8–13 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

- 8 The website www.newzealand.com aimed to provide ready-made itineraries and packages for travel companies and individual tourists.
- 9 It was found that most visitors started searching on the website by geographical location.
- 10 According to research, 26% of visitor satisfaction is related to their accommodation.
- 11 Visitors to New Zealand like to become involved in the local culture.
- 12 Visitors like staying in small hotels in New Zealand rather than in larger ones.
- 13 Many visitors feel it is unlikely that they will return to New Zealand after their visit.

READING PASSAGE 2

You should spend about 20 minutes on Questions 14–26, which are based on Reading Passage 2 on pages 21 and 22.

Questions 14–19

Reading Passage 2 has six paragraphs, A–F.

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

Write the correct number, i–viii, in boxes 14–19 on your answer sheet.

List of Headings

- i The productive outcomes that may result from boredom
- ii What teachers can do to prevent boredom
- iii A new explanation and a new cure for boredom
- iv Problems with a scientific approach to boredom
- v A potential danger arising from boredom
- vi Creating a system of classification for feelings of boredom
- vii Age groups most affected by boredom
- viii Identifying those most affected by boredom

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

Why being bored is stimulating – and useful, too

this most common of emotions is turning out to be more interesting than we thought

We all know how it feels – it's impossible to keep your mind on anything, time stretches out, and all the things you could do seem equally unlikely to make you feel better. But defining boredom so that it can be studied in the lab has proved difficult. For a start, it can include a lot of other mental states, such as frustration, apathy, depression and indifference. There isn't even agreement over whether boredom is always a low-energy, flat kind of emotion or whether feeling agitated and restless counts as boredom, too. In his book, *Boredom: A Lively History*, Peter Toohey at the University of Calgary, Canada, compares it to disgust – an emotion that motivates us to stay away from certain situations. 'If disgust protects humans from infection, boredom may protect them from "infectious" social situations,' he suggests.

By asking people about their experiences of boredom, Thomas Goetz and his team at the University of Konstanz in Germany have recently identified five distinct types: indifferent, calibrating, searching, reactant and apathetic. These can be plotted on two axes – one running left to right, which measures low to high arousal, and the other from top to bottom, which measures how positive or negative the feeling is. Intriguingly, Goetz has found that while people experience all kinds of boredom, they tend to specialise in one. Of the five types, the most damaging is 'reactant' boredom with its explosive combination of high arousal and negative emotion. The most useful is what Goetz calls 'indifferent' boredom: someone isn't engaged in anything satisfying but still feels relaxed and calm. However, it remains to be seen whether there are any character traits that predict the kind of boredom each of us might be prone to.

Psychologist Sandi Mann at the University of Central Lancashire, UK, goes further. 'All emotions are there for a reason, including boredom,' she says. Mann has found that being bored makes us more creative. 'We're all afraid of being bored but in actual fact it can lead to all kinds of amazing things,' she says. In experiments published last year, Mann found that people who had been made to feel bored by copying numbers out of the phone book for 15 minutes came up with more creative ideas about how to use a polystyrene cup than a control group. Mann concluded that a passive, boring activity is best for creativity because it allows the mind to wander. In fact, she goes so far as to suggest that we should seek out more boredom in our lives.

Psychologist John Eastwood at York University in Toronto, Canada, isn't convinced. 'If you are in a state of mind-wandering you are not bored,' he says. 'In my view, by definition boredom is an undesirable state.' That doesn't necessarily mean that it isn't adaptive, he adds. 'Pain is adaptive – if we didn't have physical pain bad things would happen to us. Does that mean that we should actively cause pain? No. But even if boredom has evolved to help us survive, it can still be toxic

if allowed to fester. For Eastwood, the central feature of boredom is a failure to put our 'attention system' into gear. This causes an inability to focus on anything, which makes time seem to go painfully slowly. What's more, your efforts to improve the situation can end up making you feel worse. 'People try to connect with the world and if they are not successful there's that frustration and irritability,' he says. Perhaps most worryingly, says Eastwood, repeatedly failing to engage attention can lead to a state where we don't know what to do any more, and no longer care.

E Eastwood's team is now trying to explore why the attention system fails. It's early days but they think that at least some of it comes down to personality. Boredom proneness has been linked with a variety of traits. People who are motivated by pleasure seem to suffer particularly badly. Other personality traits, such as curiosity, are associated with a high boredom threshold. More evidence that boredom has detrimental effects comes from studies of people who are more or less prone to boredom. It seems those who bore easily face poorer prospects in education, their career and even life in general. But of course, boredom itself cannot kill – it's the things we do to deal with it that may put us in danger. What can we do to alleviate it before it comes to that? Goetz's group has one suggestion. Working with teenagers, they found that those who 'approach' a boring situation – in other words, see that it's boring and get stuck in anyway – report less boredom than those who try to avoid it by using snacks, TV or social media for distraction.

F Psychologist Françoise Wemelsfelder speculates that our over-connected lifestyles might even be a new source of boredom. 'In modern human society there is a lot of overstimulation but still a lot of problems finding meaning,' she says. So instead of seeking yet more mental stimulation, perhaps we should leave our phones alone, and use boredom to motivate us to engage with the world in a more meaningful way.

Questions 20–23

Look at the following people (Questions 20–23) and the list of ideas below.

Match each person with the correct idea, A–E.

Write the correct letter, A–E, in boxes 20–23 on your answer sheet.

Peter Toohey

Thomas Goetz

John Eastwood

Francoise Wemelsfelder

List of Ideas

- A The way we live today may encourage boredom.
- B One sort of boredom is worse than all the others.
- C Levels of boredom may fall in the future.
- D Trying to cope with boredom can increase its negative effects.
- E Boredom may encourage us to avoid an unpleasant experience.

Questions 24–26

Complete the summary below.

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

Write your answers in boxes 24–26 on your answer sheet.

Responses to boredom

For John Eastwood, the central feature of boredom is that people cannot
 24 , due to a failure in what he calls the 'attention system', and as a
 result they become frustrated and irritable. His team suggests that those for whom
 25 is an important aim in life may have problems in coping with
 boredom, whereas those who have the characteristic of 26 can
 generally cope with it.

Test 1

READING PASSAGE 3

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

Artificial artists*Can computers really create works of art?*

The Painting Fool is one of a growing number of computer programs which, so their makers claim, possess creative talents. Classical music by an artificial composer has had audiences enraptured, and even tricked them into believing a human was behind the score. Artworks painted by a robot have sold for thousands of dollars and been hung in prestigious galleries. And software has been built which creates art that could not have been imagined by the programmer.

Human beings are the only species to perform sophisticated creative acts regularly. If we can break this process down into computer code, where does that leave human creativity? 'This is a question at the very core of humanity,' says Geraint Wiggins, a computational creativity researcher at Goldsmiths, University of London. 'It scares a lot of people. They are worried that it is taking something special away from what it means to be human.'

To some extent, we are all familiar with computerised art. The question is: where does the work of the artist stop and the creativity of the computer begin? Consider one of the oldest machine artists, Aaron, a robot that has had paintings exhibited in London's Tate Modern and the San Francisco Museum of Modern Art. Aaron can pick up a paintbrush and paint on canvas on its own. Impressive perhaps, but it is still little more than a tool to realise the programmer's own creative ideas.

Simon Colton, the designer of the Painting Fool, is keen to make sure his creation doesn't attract the same criticism. Unlike earlier 'artists' such as Aaron, the Painting Fool only needs minimal direction and can come up with its own concepts by going online for material. The software runs its own web searches and trawls through social media sites. It is now beginning to display a kind of imagination too, creating pictures from scratch. One of its original works is a series of fuzzy landscapes, depicting trees and sky. While some might say they have a mechanical look, Colton argues that such reactions arise from people's double standards towards software-produced and human-produced art. After all, he says, consider that the Painting Fool painted the landscapes without referring to a photo. 'If a child painted a new scene from its head, you'd say it has a certain level of imagination,' he points out. 'The same should be true of a machine.' Software bugs can also lead to unexpected results. Some of the Painting Fool's paintings of a chair came out in black and white, thanks to a technical glitch. This gives the work an eerie, ghostlike quality. Human artists like the renowned Ellsworth Kelly are lauded for limiting their colour palette – so why should computers be any different?

Researchers like Colton don't believe it is right to measure machine creativity directly to that of humans who 'have had millennia to develop our skills'. Others, though, are fascinated by the prospect that a computer might create something as original and subtle as our best artists. So far, only one has come close. Composer David Cope invented a program called Experiments in Musical Intelligence, or EMI. Not only did EMI create compositions in Cope's style, but also that of the most revered classical composers, including Bach, Chopin and Mozart. Audiences were moved to tears, and EMI even fooled classical music experts into thinking they were hearing genuine Bach. Not everyone was impressed however. Some, such as Wiggins, have blasted Cope's work as pseudoscience, and condemned him for his deliberately vague explanation of how the software worked. Meanwhile, Douglas Hofstadter of Indiana University said EMI created replicas which still rely completely on the original artist's creative impulses. When audiences found out the truth they were often outraged with Cope, and one music lover even tried to punch him. Amid such controversy, Cope destroyed EMI's vital databases.

But why did so many people love the music, yet recoil when they discovered how it was composed? A study by computer scientist David Moffat of Glasgow Caledonian University provides a clue. He asked both expert musicians and non-experts to assess six compositions. The participants weren't told beforehand whether the tunes were composed by humans or computers, but were asked to guess, and then rate how much they liked each one. People who thought the composer was a computer tended to dislike the piece more than those who believed it was human. This was true even among the experts, who might have been expected to be more objective in their analyses.

Where does this prejudice come from? Paul Bloom of Yale University has a suggestion: he reckons part of the pleasure we get from art stems from the creative process behind the work. This can give it an 'irresistible essence', says Bloom. Meanwhile, experiments by Justin Kruger of New York University have shown that people's enjoyment of an artwork increases if they think more time and effort was needed to create it. Similarly, Colton thinks that when people experience art, they wonder what the artist might have been thinking or what the artist is trying to tell them. It seems obvious, therefore, that with computers producing art, this speculation is cut short – there's nothing to explore. But as technology becomes increasingly complex, finding those greater depths in computer art could become possible. This is precisely why Colton asks the Painting Fool to tap into online social networks for its inspiration: hopefully this way it will choose themes that will already be meaningful to us.

Test 1.

Questions 27-31

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

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

- 27 What is the writer suggesting about computer-produced works in the first paragraph?
- A People's acceptance of them can vary considerably.
 - B A great deal of progress has already been attained in this field.
 - C They have had more success in some artistic genres than in others.
 - D The advances are not as significant as the public believes them to be.
- 28 According to Geraint Wiggins, why are many people worried by computer art?
- A It is aesthetically inferior to human art.
 - B It may ultimately supersede human art.
 - C It undermines a fundamental human quality.
 - D It will lead to a deterioration in human ability.
- 29 What is a key difference between Aaron and the Painting Fool?
- A its programmer's background
 - B public response to its work
 - C the source of its subject matter
 - D the technical standard of its output
- 30 What point does Simon Colton make in the fourth paragraph?
- A Software-produced art is often dismissed as childish and simplistic.
 - B The same concepts of creativity should not be applied to all forms of art.
 - C It is unreasonable to expect a machine to be as imaginative as a human being.
 - D People tend to judge computer art and human art according to different criteria.
- 31 The writer refers to the paintings of a chair as an example of computer art which
- A achieves a particularly striking effect.
 - B exhibits a certain level of genuine artistic skill.
 - C closely resembles that of a well-known artist.
 - D highlights the technical limitations of the software.

Questions 32–37

Complete each sentence with the correct ending, A–G below.

Write the correct letter, A–G, in boxes 32–37 on your answer sheet.

Simon Colton says it is important to consider the long-term view when

David Cope's EMI software surprised people by

Geraint Wiggins criticised Cope for not

Douglas Hofstadter claimed that EMI was

Audiences who had listened to EMI's music became angry after

The participants in David Moffat's study had to assess music without

List of Ideas

- A generating work that was virtually indistinguishable from that of humans.
- B knowing whether it was the work of humans or software.
- C producing work entirely dependent on the imagination of its creator.
- D comparing the artistic achievements of humans and computers.
- E revealing the technical details of his program.
- F persuading the public to appreciate computer art.
- G discovering that it was the product of a computer program.

SECTION 1

Questions 1–14

Read the text below and answer Questions 1–7.

A CURE FOR THE COMMON COLD?

The average person comes down with three colds a year, each lasting for about nine days. There is still no cure but the following advice may help.

Take time off work, because your body will fight off the cold virus better if it is well rested. However, if you have to work, avoid close contact with your co-workers as the virus is contagious. Wash your hands frequently or use an alcohol-based disinfectant gel. Non-sedating allergy medications, which you can buy from a chemist, can decrease drowsiness and also alleviate the problems of a runny nose, watery eyes and blocked sinuses.

As soon as you feel a cold coming on, boost your fluid intake. Water or juice is ideal but hot herbal teas with lemon will help thin mucus and expel it from the body. A warm gargle with salt water will relieve a scratchy throat by reducing inflammation and clearing mucus and irritants. It also flushes out bacteria and viruses so it can be used as a preventative measure as well.

The warm moisture generated by a hot shower or bath will soothe and clear nasal passages. Inhaling steam over a bowl of hot water relieves congested sinuses, too. For a tickly cough, the latest research suggests that honey, either straight from the jar or dissolved in a hot drink, works as well if not better than costly lozenges and sprays.

A good diet is essential for a quick recovery, so start the day with a healthy breakfast including vitamin C in the form of fresh fruit or berries. For lunch, chicken soup is good, but be sure to add chunks of lean chicken meat, for protein helps build immune cells. Not only is this the perfect comfort food but it has been proven to be medicinally beneficial. For dinner, a spicy curry makes a good decongestant and some ingredients (ginger, garlic, chilli) are recognised as being anti-viral and anti-bacterial.

A little light exercise is beneficial, as this will enhance your emotional wellbeing, but don't attempt anything too strenuous. Finally, to recharge your body and regain your strength, you need a full eight hours' sleep.

Questions 1-7

Complete the summary below.

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

Write your answers in boxes 1-7 on your answer sheet.

People usually get three colds every year. When sick, it is good to stay away from work because you need rest and you could spread the illness to 1 Reduce 2 and cold symptoms by using medicines that you can buy from a pharmacy.

Drink a lot and gargle with salt water to help clear your throat. Gargling with salt water is a good 3 to keep you safe from future illness, too. Steam helps clear the nose and 4, instead of expensive medicine, is good for a cough.

Take lots of vitamin C. Chicken soup is healthy and it is ideal 5, as well as having curative properties. In the evening, a meal of hot curry will clear the airways. This also has 6 that can neutralise harmful bacteria and viruses. Some kind of 7 is a good idea to improve your mood and sleep will help you to get better.

Questions 8–14

Read the text and answer questions 8–14.

CAR THEFT

Car theft is a constant problem, but if you own a newer model of car, there is less likelihood of it being stolen. Newer models incorporate security systems that help prevent theft. However, thieves often steal car keys to access newer vehicles so it is a good policy to know where your keys are at all times. Never leave them in your car, even if it is parked in your garage at home. You make life easy for the burglar if you leave keys in a receptacle just inside the door or hanging from a hook. Think of a less obvious place, hidden from view. Once a thief has access to your keys, everything you own is at risk, including your personal safety.

While older cars are a potential target, there are some simple precautions you should take. Definitely, lock your car before you leave it, even for the shortest time, even in the driveway of your house. Think of installing an alarm or a steering lock or consider a mechanical immobilizer that fits across the steering wheel. This is a relatively inexpensive item but it is a good deterrent for thieves. They generally go for the easiest and fastest option.

Obviously, it is in your own interest to make your vehicle as difficult to steal as possible – not only to avoid stress and inconvenience, but also because your insurance premiums will soar if you make a claim. If you are unfortunate enough to have your vehicle stolen, phone the police immediately. You will need to provide information relating to your vehicle including make, model, year, colour, registration number and VIN (vehicle identification number). You need all of this when you file a stolen vehicle report. Police will also log any personal items that were in the vehicle. If these items include identifying documents such as a registration certificate, this will make the illegal resale of the vehicle simpler for the thieves, so keep these documents in a separate place.

Next, contact your insurance company. If your wallet was in the car and it contained credit cards, you will need to notify your bank. If your house keys were in the car, call a locksmith and have your locks changed, and if you are still making payments on the car, you will need to inform the finance company. Both your insurance company and the finance company will ask you for copies of the police report so it is best to obtain one in the first instance.

Questions 8-14

Complete the notes below.

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

Write your answers in boxes 8–14 on your answer sheet.

Car theft

- modern cars are more difficult to steal because of their 8
- If they have your keys, burglars could steal your car or even threaten your 9
- older models are easier to steal, so get an alarm or steering lock or use an immobilizer (cheap but effective 10))
- the loss of your car is stressful and also makes your 11 more expensive
- If your car is taken:
 - call the police
 - supply all identifying information for vehicle – fill out a 12
 - NB: the 13 of the vehicle will be easier for the thieves if you leave official papers inside
 - call the insurance company, bank (if necessary), and the 14 if you owe money on the car

SECTION 2**Questions 15-27**

Read the text and answer questions 15-20.

HOW TO WRITE A JOB TRANSFER REQUEST

If you want to transfer to a division of the company in another city, you should write a job transfer application letter to your Departmental Head or Human Resources expressing your reasons.

Employees may seek a transfer:

- to undertake professional development (e.g. learn new skills or a new line of business)
- to confront new challenges (e.g. you have mastered all the duties related to your current position which has now become routine and you feel the need for a change)
- to break away from unrelenting tension or conflict within a team
- to cope with a change in life's circumstances (e.g. family illness, marriage, divorce, birth of a child)
- to recover from illness or manage the aging process (e.g. physical pain, fatigue) – in this instance, you may want to request reduced working hours or lighter duties
- to change the nature of your job (e.g. from on-the-road to a non-travelling role)
- to repatriate (i.e. return to country of origin)

A job transfer request made for personal reasons should state those reasons clearly and succinctly. However, you should also highlight your achievements, strengths and abilities, draw attention to your familiarity with the organization's values and practices, and demonstrate how the company will benefit from the transfer. If appropriate, include a transition plan, which includes training a new person for your current job.

The job transfer request letter should be written in formal business format with a polite and respectful tone. The employee should keep copies of all communications concerning the transfer request.

Note that, if you want to apply for an existing, advertised vacancy within the company, you should fill in the application document, write a cover letter, and treat it as you would an external application.

Questions 15–20

Complete the notes below.

Complete the summary using the list of words, A–L, below.

Write the correct letter, A–L, in boxes 15–20 on your answer sheet.

How to request a transfer

To get a job with a different 15 of the firm, write a formal letter stating your reasons.

These may include professional development; adjusting to a different family 16

leaving a stressful work environment; ill health or old age; desire for a different type of

17; or repatriation.

Apart from personal reasons, you should focus on your 18: what advantages there are for the firm, and your knowledge and understanding of company

19 You may need to attach a transition plan.

If the job you would like has been advertised, you need to complete the appropriate

20

A employment

B company

C change

D talents

E situation

F letters

G hardships

H evidence

I form

J culture

K conflict

L branch

SECTION 2**Questions 21-27**

Read the text below and answer Questions 21–27.

REDUNDANCY**WHAT YOU SHOULD KNOW**

Getting laid off can be distressing and demoralizing for the employee. Two features differentiate redundancy from other grounds for termination. Firstly, the position must be justifiably superfluous to the employer's requirements and, secondly, the employee must not be at fault. Redundancy cannot be used as a means of dispensing with a poorly performing employee, or one who has been guilty of misconduct in the workplace.

Whether a position is truly redundant is a matter of business judgment for the employer. Whereas minimal modifications to a job role do not amount to grounds for redundancy, a worker who has an obsolete skill set because of the introduction of new technology, for example, can be made redundant. Sometimes the reason for redundancy is obvious to employees, such as the relocation of the business to another city or province, closing down, or selling the business; but sometimes it is less obvious, such as a takeover by another firm. A company can also make redundancies in order to operate more efficiently and cost effectively, if there are financial issues leading to downsizing or if it is no longer using a certain department, for example. In some situations, a company may decide to lay off part of its workforce because it can no longer sustain some in-house services and it wants to outsource certain business functions.

The employer must consult 'in good faith' (sincerely and honestly) with the affected workers before making the ultimate decision. Reasons for the reorganisation must be presented and workers must have an opportunity to have their say. The employer must take into account any feedback that employees provide. Where possible, the employer should weigh up the alternatives, such as transfer within the company or a reduction in hours. The final decision, however, rests with the employer. The notice period for redundancy will usually be stipulated in the original employment contract. If not, then 'reasonable notice' is required and this will depend on the circumstances, such as seniority and length of service.

In some situations, employees may wish to challenge their redundancy in court, and this must be done within 90 days of the decision. The employer must show that the redundancy was genuinely decided on commercial grounds and that there was a frank and honest consultation with the employee before the final decision was made. The business must give evidence to show that the grounds for redundancy were objective, reasonable and fair. The court will then perform its own assessment of whether the restructure was necessary.

Questions 21–24

Choose FOUR letters, A–H.

Write the correct letters in boxes 21–24 on your answer sheet.

Which FOUR of the following are genuine reasons for redundancy?

- A the company moves to a new place
- B the company wants to hire a younger workforce
- C the company has recently taken on other people
- D the company no longer requires as many employees
- E the company wants to get rid of badly behaved employees
- F the employer contracts another firm to perform the work
- G the employer has no need of underperforming employees
- H the employer's need for a particular type of work has ceased

Questions 25–27

Complete the sentences below.

Choose NO MORE THAN TWO WORDS from the text for each answer.

Write your answers in boxes 25–27 on your answer sheet.

- 25 The company has to consult with workers before making the final redundancy decision; it must provide reasons and consider the workers'
- 26 A period of of redundancy is needed, where this is not stated in the contract.
- 27 If employees contest their redundancy, employers must provide for the redundancy decision.

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SECTION 3

Questions 28–40

Read the text below and answer Questions 28–40.

A BOOK REVIEW – *DOG WILL HAVE HIS DAY* BY FRED VARGAS (TRANSLATED BY SIAN REYNOLDS)

This is another crime thriller from the prize-winning novelist Fred Vargas. Despite the misleading first name and Spanish surname, the author is actually a French woman – Frédérique Audoin-Rouzeau. She adopted her nom de plume from the Ava Gardner character, the Spanish dancer Maria Vargas, in the 1954 film *The Barefoot Contessa*. Although a writer of crime fiction, Frederique Audoin-Rouzeau is primarily a medieval historian and archaeologist.

Her detective books are immensely popular: over 10 million copies have been sold worldwide and they have been translated into 45 languages. She is a little mystified by her success – after all, it is just a hobby – and finds it quite amusing. As an archaeologist specialising in epidemiology, she produced the definitive study on the transmission of the bubonic plague – a book that she says “after seven years of intensive work trying to find the real vector of the plague” sold only a thousand copies. It is even more paradoxical to learn that she wrote each of her novels in three weeks flat, during her annual summer holidays. Even when she took a break from archaeology to work full-time on her fiction, the first draft was still finished within the same time frame. She uses the ensuing months to polish and tidy the prose.

Perhaps by virtue of Vargas' archaeological background, *Dog Will Have His Day* starts with a bone. It turns out to be the top joint of a woman's big toe, found by chance in Paris by Louis Kehlweiler, a former special investigator for the Ministry of Justice. He presents his find to the local police, who decline to do anything about it. However, Louis, convinced that a murder has taken place, decides to focus on finding the body to which the toe belongs.

Most of Vargas' characters are eccentrics in some way and Louis is no exception. He carries a toad named Bufo around in his pocket and consults it on matters of importance, although Louis says: “You have to keep it simple with Bufo, just basic ideas ... He can't cope with anything else. Sometimes I try a bit harder, a bit of philosophy even, to improve his mind ... He was much more stupid when I first got him.” Louis recruits the assistance of Marc Vandoosler, one of the ‘evangelists’ of a previous novel, *The Three Evangelists*. The evangelists, actually unemployed historians, share a rundown house and Marc is the medieval researcher among them. Later, another of the evangelists, Mathias, the hunter-gatherer (a prehistoric specialist), joins the undertaking.

As the bone fragment had obviously passed through a dog's digestive system, Louis' first mission is to track down the dog in question. Ringo, a pit bull, is eventually identified as the culprit and his owner is tracked to a tiny Breton fishing village. There, Marc and Louis establish that the corpse of an old woman missing her big toe had been discovered on the beach a few days earlier. The investigation takes in some interesting characters, including a collector of antique typewriters. Although initially suspecting just one murder, Louis, with the help of Marc and Mathias, manages to solve three homicides and unmask a would-be mayoral candidate who is in fact wanted for crimes against humanity dating from the Second World War.

SECTION 3 (continued)

As an aficionado of crime fiction, I find Vargas' prose far from conventional. It is original, enthralling and witty, occasionally whimsical and surreal, but always with a delightful simplicity. The main characters have their little catchphrases such as "I could do with a beer" (Louis) which makes them endearingly human. She has a cast of quirky provincial characters expertly portrayed; far removed from the darkly humorous, brutally violent, hard-edged Scandinavian realism which is so widely admired these days. Vargas definitely swims against the tide of realism – there is a lack of elaborate description – no detailed depictions of the meals eaten, clothes worn, music listened to or cars driven. This is enormously refreshing: frankly, how essential is it to know the make of a vehicle or the brand of beer? Unless, of course, it is inextricably linked to the unravelling of the plot.

Comparatively speaking, the plot of this book appears at first to be a little on the light side although her bizarre characters and inventiveness keep the reader well entertained. However, the story suddenly becomes convoluted towards the end and the denouement rapidly ensues, leaving the reader feeling short-changed. It is not as ingenious or inspired as *The Three Evangelists* – one of her finest novels and a hard act to follow – but the well-judged inclusion of Marc leaves the reader wanting to see more of the other two evangelists. Despite some shortcomings, it is still a brilliant read and I remain a steadfast fan.

IELTS™**Questions 28–36**

Complete the summary below.

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

Write your answers in boxes 28–36 on your answer sheet.

Fred Vargas is the 28 of Frédérique Audoin-Rouzeau. She has two main professions, and writing crime novels is her 29 She thinks it is funny that her fiction is so popular, in contrast to her academic writing, which does not sell so well. It took many years of research before she published her book about the 30 whereas she can write the first draft of a detective story in just 31, although it takes quite a bit longer to correct and change the 32

Dog Will Have His Day is a story about a piece of human bone, and Louis Kehlweiler's attempts to solve a murder mystery. Kehlweiler is a typical example of Vargas' heroes, many of whom are 33; in his case, he has a pet toad who he chats to regularly. He enlists the help of Marc and Mathias, both 34 who had featured as evangelists in an earlier Vargas novel. They end up in a small 35 where they learn that a woman's body had recently been found on the beach. In the course of their investigation, they uncover more murders and 36 a war criminal.

Questions 37–40

Do the following statements agree with the views of the writer in SECTION 3?

In boxes 37–40 on your answer sheet, write

- YES** If the statement agrees with the views of the writer
- NO** If the statement contradicts the views of the writer
- NOT GIVEN** if it is impossible to say what the writer thinks about this

- 37 Vargas' style of writing is typical of crime fiction.
- 38 The style has much in common with Scandinavian crime novels.
- 39 Detailed descriptions are only useful to the reader when they develop the storyline.
- 40 The Three Evangelists is Vargas' best selling novel.