IELTS READING (ACADEMIC)

Actual Tests With Answers

MARCH - JUNE 2022

TARGET SERIES

Published by

IELTSMaterial.com

Preface

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

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

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

Don’t just trust luck in your IELTS exam – the key is practice!

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Table of Contents

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IELTS Reading Test 1

Section 1

Instructions to follow

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

Persistent Bullying Is One of The Worst Experiences A Child Can Face

How can it be prevented? Peter Smith, Professor of Psychology at the University of Sheffield, directed the Sheffield Anti-Bullying Intervention Project, funded by the Department for Education.

Here he reports on his findings.

A. Bullying can take a variety of forms, from the verbal – being taunted or called hurtful names – to the physical – being kicked or shoved – as well as indirect forms, such as being excluded from social groups. A survey I conducted with Irene Whitney found that in British primary schools up to a quarter of pupils reported experience of bullying, which in about one in ten cases was persistent. There was less bullying in secondary schools, with about one in twenty-five suffering persistent bullying, but these cases may be particularly recalcitrant.

B. Bullying is clearly unpleasant, and can make the child experiencing it feel unworthy and depressed. In extreme cases it can even lead to suicide, though this is thankfully rare. Victimised pupils are more likely to experience difficulties with interpersonal relationships

as adults, while children who persistently bully are more likely to grow up to be physically violent, and convicted of anti-social offences.

C. Until recently, not much was known about the topic, and little help was available to teachers to deal with bullying. Perhaps as a consequence, schools would often deny the problem. 'There is no bullying at this school' has been a common refrain, almost certainly untrue. Fortunately, more schools are now saying: There is not much bullying here, but when it occurs, we have a clear policy for dealing with it.'

D. Three factors are involved in this change. First is an awareness of the severity of the problem. Second, a number of resources to help tackle bullying have become available in Britain. For example, the Scottish Council for Research in Education produced a package of materials, Action Against Bullying, circulated to all schools in England and Wales as well as in Scotland in summer 1992, with a second pack, Supporting Schools Against Bullying, produced the following year.

In Ireland, Guidelines on Countering Bullying Behaviour in Post-Primary Schools was published in 1993. Third, there is evidence that these materials work, and that schools can achieve something. This comes from carefully conducted 'before and after' evaluations of interventions in schools, monitored by a research team. In Norway, after an intervention campaign was introduced nationally, an evaluation of forty-two schools suggested that, over a two-year period, bullying was halved. The Sheffield investigation, which involved sixteen primary schools and seven secondary schools, found that most schools succeeded in reducing bullying.

E. Evidence suggests that a key step is to develop a policy on bullying, saying clearly what is meant by bullying, and giving explicit guidelines on what will be done if it occurs, what records will be kept, who will be informed, what sanctions will be employed. The policy

should be developed through consultation, over a period of time – not just imposed from the head teacher's office! Pupils, parents and staff should feel they have been involved in the policy, which needs to be disseminated and implemented effectively.

Other actions can be taken to back up the policy. There are ways of dealing with the topic through the curriculum, using video, drama and literature. These are useful for raising awareness, and can best be tied in to early phases of development, while the school is starting to discuss the issue of bullying. They are also useful in renewing the policy for new pupils, or revising it in the light of experience. But curriculum work alone may only have short-term effects; it should be an addition to policy work, not a substitute.

There are also ways of working with individual pupils, or in small groups. Assertiveness training for pupils who are liable to be victims is worthwhile, and certain approaches to group bullying such as 'no blame', can be useful in changing the behaviour of bullying pupils without confronting them directly, although other sanctions may be needed for those who continue with persistent bullying.

Work in the playground is important, too. One helpful step is to train lunchtime supervisors to distinguish bullying from playful fighting, and help them break up conflicts. Another possibility is to improve the playground environment, so that pupils are less likely to be led into bullying from boredom or frustration.

F. With these developments, schools can expect that at least the most serious kinds of bullying can largely be prevented. The more effort put in and the wider the whole school involvement, the more substantial the results are likely to be. The reduction in bullying – and the consequent improvement in pupil happiness – is surely a worthwhile objective.

Questions 1-4

Instructions to follow

- Reading Passage 1 has six sections, A-F. Choose the correct heading for sections A-D from the list of headings below.
- Write the correct number, i-vii, in boxes 1-4 on your answer sheet.

List of Headings

i. The role of video violence

ii. The failure of government policy

iii. Reasons for the increased rate of bullying

iv. Research into how common bullying is in British schools

v. The reaction from schools to enquiries about bullying

vi. The effect of bullying on the children involved

vii. Developments that have led to a new approach by schools

1 Section A

2 Section B

3 Section C

4 Section D

Questions 5-8

Instructions to follow

- Choose the correct answer A, B, C or D.

5 A recent survey found that in British secondary schools

A there was more bullying than had previously been the case.
B there was less bullying than in primary schools.
C cases of persistent bullying were very common.
D indirect forms of bullying were particularly difficult to deal with.

6 Children who are bullied

A are twice as likely to commit suicide as the average person.
B find it more difficult to relate to adults.
C are less likely to be violent in later life.
D may have difficulty forming relationships in later life.

7 The writer thinks that the declaration 'There is no bullying at this school'

A is no longer true in many schools.
B was not in fact made by many schools.
C reflected the school's lack of concern.
D reflected a lack of knowledge and resources.

8 What were the findings of research carried out in Norway?

A ○ Bullying declined by 50% after an anti-bullying campaign.

B ○ Twenty-one schools reduced bullying as a result of an anti-bullying campaign.

C ○ Two years is the optimum length for an anti-bullying campaign.

D ○ Bullying is a less serious problem in Norway than in the UK.

Questions 9-13

Instructions to follow

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

What steps should schools take to reduce bullying?

The most important step is for the school authorities to produce a 9 ..... which makes the school's attitude towards bullying quite clear.

It should include detailed 10 ..... as to how the school and its staff will react if bullying occurs.

In addition, action can be taken through the 11 ..... .

This is particularly useful in the early part of the process, as a way of raising awareness and encouraging discussion.

On its own, however, it is insufficient to bring about a permanent solution.

Effective work can also be done with individual pupils and small groups.

For example, potential 12 ..... of bullying can be trained to be more self-confident.

Or again, in dealing with group bullying, a 'no blame' approach, which avoids confronting the offender too directly, is often effective.

Playground supervision will be more effective if members of staff are trained to recognise the difference between bullying and mere 13 ..... .

Questions 14

Instructions to follow

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

Which of the following is the most suitable title for Reading Passage?

A Bullying: what parents can do

B Bullying: arc the media to blame?

C Bullying: the link with academic failure

D Bullying: from crisis management to prevention

Section 2

Instructions to follow

- You should spend 20 minutes on Questions 15-27 which are based on Reading Passage 2

The Left or Right Handed

A. The probability that two right-handed people would have a left-handed child is only about 9.5 percent. The chance rises to 19.5 percent if one parent is a lefty and 26 percent if both parents are left-handed: The preference, however, could also stem from an infant's imitation of his parents. To test genetic influence, starting in the 1970s British biologist Marian Annett of the University of Leicester hypothesized that no single gene determines handedness. Rather, during fetal development, a certain molecular factor helps to strengthen the brain's left hemisphere, which increases the probability that the right hand will be dominant because the left side of the brain controls the right side of the body, and vice versa. Among the minority of people who lack this factor, handedness develops entirely by chance.

Research conducted on twins complicates the theory, however. One in five sets of identical twins involves one right-handed and one left-handed person, despite the fact that their genetic material is the same. Genes, therefore, are not solely responsible for handedness.

B. The genetic theory is also undermined by results from Peter Hepper and his team at Queen's University in Belfast, Ireland. In 2004 the psychologists used ultrasound to show that by the 15th week of pregnancy, fetuses already have a preference as to which

thumb, they suck. In most cases, the preference continued after birth. At 15 weeks, though, the brain does not yet have control over the body's limbs. Hepper speculates that fetuses tend to prefer whichever side of the body is developing quicker and that their movements, in turn, influence the brain's development. Whether this early preference is temporary or holds up throughout development and infancy is unknown. Genetic predetermination is also contradicted by the widespread observation that children do not settle on either their right or left hand until they are two or three years old.

C. But even if these correlations were true, they did not explain what actually causes left-handedness. Furthermore, specialization on either side of the body is common among animals. Cats will favor one paw over another when fishing toys out from under the couch. Horses stomp more frequently with one hoof than the other. Certain crabs motion predominantly with the left or right claw. In evolutionary terms, focusing power and dexterity in one limb is more efficient than having to train two, four or even eight limbs equally. Yet for most animals, the preference for one side or the other is seemingly random. The overwhelming dominance of the right hand is associated only with humans. That fact directs attention toward the brain's two hemispheres and perhaps toward language.

D. Interest in hemispheres dates back to at least 1836. That year, at a medical conference, French physician Marc Dax reported on an unusual commonality among his patients. During his many years as a country doctor, Dax had encountered more than 40 men and women for whom speech was difficult, the result of some kind of brain damage. What was unique was that every individual suffered damage to the left side of the brain. At the conference, Dax elaborated on his theory, stating that each half of the brain was responsible for certain functions and that the left hemisphere controlled speech. Other

experts showed little interest in the Frenchman's ideas.

Over time, however, scientists found more and more evidence of people experiencing speech difficulties following an injury to the left brain. Patients with damage to the right hemisphere most often displayed disruptions in perception or concentration. Major advancements in understanding the brain's asymmetry were made in the 1960s as a result of so-called split-brain surgery, developed to help patients with epilepsy. During this operation, doctors severed the corpus callosum – the nerve bundle that connects the two hemispheres. The surgical cut also stopped almost all normal communication between the two hemispheres, which offered researchers the opportunity to investigate each side's activity.

E. In 1949 neurosurgeon Juhn Wada devised the first test to provide access to the brain's functional organization of language. By injecting an anesthetic into the right or left carotid artery, Wada temporarily paralyzed one side of a healthy brain, enabling him to more closely study the other side's capabilities. Based on this approach, Brenda Milner and the late Theodore Rasmussen of the Montreal Neurological Institute published a major study in 1975 that confirmed the theory that country doctor Dax had formulated nearly 140 years earlier: in 96 percent of right-handed people, language is processed much more intensely in the left hemisphere. The correlation is not as clear in lefties, however. For two-thirds of them, the left hemisphere is still the most active language processor. But for the remaining third, either the right side is dominant or both sides work equally, controlling different language functions.

That last statistic has slowed acceptance of the notion that the predominance of right-handedness is driven by left-hemisphere dominance in language processing. It is not at all clear why language control should somehow have dragged the control of body

movement with it. Some experts think one reason the left hemisphere reigns over language is that the organs of speech processing – the larynx and tongue – are positioned on the body's symmetry axis. Because these structures were centered, it may have been unclear, in evolutionary terms, which side of the brain should control them, and it seems unlikely that shared operation would result in smooth motor activity.

Language and handedness could have developed preferentially for very different reasons as well. For example, some researchers, including evolutionary psychologist Michael C. Corballis of the University of Auckland in New Zealand, think that the origin of human speech lies in gestures. Gestures predated words and helped language emerge. If the left hemisphere began to dominate speech, it would have dominated gestures, too, and because the left brain controls the right side of the body, the right hand developed more strongly.

F. Perhaps we will know more soon. In the meantime, we can revel in what, if any, differences handedness brings to our human talents. Popular wisdom says right-handed, left-brained people excel at logical, analytical thinking. Left-handed, right-brained individuals are thought to possess more creative skills and maybe better at combining the functional features emergent on both sides of the brain. Yet some neuroscientists see such claims as pure speculation. Fewer scientists are ready to claim that left-handedness means greater creative potential. Yet lefties are prevalent among artists, composers and the generally acknowledged great political thinkers. Possibly if these individuals are among the lefties whose language abilities are evenly distributed between hemispheres, the intense interplay required could lead to unusual mental capabilities.

G. Or perhaps some lefties become highly creative because they must be more clever to get by in our right-handed world. This battle, which begins during the very early stages of childhood, may lay the groundwork for exceptional achievements.

Questions 15-19

Instructions to follow

- The Reading Passage has seven paragraphs A-G. Which paragraph contains the following information?
- Write the correct letter, A-G, in boxes 15-19 on your answer sheet.
- **NB** You may use any letter more than once.

15 The phenomenon of using one side of their body for animals.

A ○ B ○ C ○ D ○ E ○ F ○ G ○

16 Statistics on the rate of one-handedness born.

A ○ B ○ C ○ D ○ E ○ F ○ G ○

17 The age when the preference for using one hand is fixed.

A ○ B ○ C ○ D ○ E ○ F ○ G ○

18 great talents of occupations in the left-handed population.

A ○ B ○ C ○ D ○ E ○ F ○ G ○

19 The earliest record of researching hemisphere's function.

A ○ B ○ C ○ D ○ E ○ F ○ G ○

Questions 20-23

Instructions to follow

- Look at the following researchers and the lists of findings below.
- Match each researcher with the correct findings

A Brenda Milner

B Marian Annett

C Peter Hepper

D Michale Corballis

20 Ancient language evolution is connected to body gesture and therefore influences handedness.

A ○ B ○ C ○ D ○

21 A child handedness is not determined by just biological factors.

A ○ B ○ C ○ D ○

22 Language process is generally undergoing in the left hemisphere of the brain.

A ○ B ○ C ○ D ○

23 The rate of development of one side of the body has an influence on hemisphere preference in the fetus.

A ○ B ○ C ○ D ○

Questions 24-27

Instructions to follow

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

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

24 The study of twins shows that genetic determination is not the only factor for left Handedness.

25 The number of men with left-handedness is more than that of women.

26 Marc Dax's report was widely recognized in his time.

27 Juhn Wada based his findings on his research of people with language problems.

Section 3

Instructions to follow

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

Deafhood

A. At this point, you might be wondering: what does 'deafhood' mean? Is it a synonym for 'deafness'? Is it a slightly more politically correct term to express the very same concept you've grown accustomed to-a person who lacks the power of hearing, or a person whose hearing is impaired? What's wrong with terms like 'hard of hearing' or 'deafness'? Have they not represented the deaf community just fine for the past few centuries? Who came up with the term 'Deafhood' anyway, and why?

B. The term 'Deafhood' was first coined in 1993 by Dr Paddy Ladd, a deaf scholar in the Deaf Studies Department at the University of Bristol in England. First explored through his doctoral dissertation in 1998, and later elaborated on in his 2003 book, *'Understanding Deaf Culture – In Search of Deafhood*', the idea behind Deafhood is twofold: first, it seeks to collect everything that is already known about the life, culture, politics, etc. of Sign Language Peoples (SLPs); secondly, it attempts to remove the limitations imposed on SLPs through their colonization from hearing people.

C. In order to understand what Deafhood represents, it's first important to understand what is meant by colonisation. To do that, we need to examine two terms: Oralism and Audism. Oralism is a philosophy that first emerged in the late 19th century, and which suggests that reduced use of sign language would be more beneficial to SLPs, as it would allow them to integrate better to the hearing world. In that respect, sign language is dismissively

regarded as a mere obstacle to listening skills and acquisition of speech-treated, in effect, in the same manner as the languages of other peoples who were oppressed and colonised, e.g., the Maori in New Zealand, or the Aborigines in Australia.

Audism, however, is an even more sinister ideology: first coined in 1975 by Dr Tom Humphries of the University of California in San Diego, it describes the belief that deaf people are somehow inferior to hearing people, and that deafhood – or, in this case, we should say 'deafness' – is a flaw, a terrible disability that needs to be eliminated. It is the effect of these two ideologies that Deafhood seeks to counter, by presenting SLPs in a positive light, not as patients who require treatment.

D. But even if we understand the oppression that SLPs have suffered at the hands of hearing people since the late 1800s, and even if we acknowledge that 'deafness' is a medical term with negative connotations that need to be replaced, that doesn't mean it's easy to explain what the term Deafhood represents exactly. This is because Deafhood is, as Dr Donald Grushkin puts it, a 'physical, emotional, mental, spiritual, cultural and linguistic' journey that every deaf person is invited-but not obligated-to embark on.

E. Deafhood is essentially a search for understanding: what does being 'Deaf' mean? How did deaf people in the past define themselves, and what did they believe to be their reasons for existing before Audism was conceived? Why are some people born deaf? Are they biologically defective, or are there more positive reasons for their existence? What do terms like 'Deaf Art' or 'Deaf Culture' actually mean? What is 'the Deaf Way' or doing things? True Deafhood is achieved when a deaf person feels comfortable with who they are and connected to the rest of the deaf community through use of their natural language, but the journey there might differ.

F. Aside from all those questions, however, Deafhood also seeks to counter the effect of

what is known as 'neo-eugenics'. Neo-eugenics, as described by Patrick Boudreault at the 2005 California Association of the Deaf Conference, is a modern manifestation of what has traditionally been defined as 'eugenics', i.e., an attempt to eradicate any human characteristics which are perceived as negative.

Deaf people have previously been a target of eugenicists through the aforementioned ideologies of Audism and Oralism, but recent developments in science and society-such as cochlear implants or genetic engineering-mean that Deafhood is once again under threat, and needs to be protected. The only way to do this is by celebrating the community's history, language, and countless contributions to the world, and confronting those who want to see it gone.

G. So, how do we go forward? We should start by decolonising SLPs-by embracing Deafhood for what it is, removing all the negative connotations that surround it and accepting that deaf people are neither broken nor incomplete. This is a task not just for hearing people, but for deaf people as well, who have for decades internalised society's unfavourable views of them.

We should also seek recognition of the deaf community's accomplishments, as well as official recognition of sign languages around the world by their respective governments. Effectively, what we should do is ask ourselves: how would the Deaf community be like, had it never been colonised by the mainstream world? And whatever it is it would be like, we should all together-hearing and Deaf alike-strive to achieve it.

Questions 28-34

Instructions to follow

- The reading passage has seven paragraphs, A-G. Which paragraph contains the following information?
- Write the correct letter, A-G, in boxes 28-33 on your answer sheet.

28 Examples of other groups treated the same way as deaf people

A ○ B ○ C ○ D ○ E ○ F ○ G ○

29 Why the word 'deafness' is no longer appropriate

A ○ B ○ C ○ D ○ E ○ F ○ G ○

30 The definition of the word 'deaf'

A ○ B ○ C ○ D ○ E ○ F ○ G ○

31 Why deaf people might sometimes think negatively of themselves

A ○ B ○ C ○ D ○ E ○ F ○ G ○

32 How one can attain deafhood

A ○ B ○ C ○ D ○ E ○ F ○ G ○

33 Where the word 'deafhood' came from

A ○ B ○ C ○ D ○ E ○ F ○ G ○

34 Why deafhood is currently imperiled

A ○ B ○ C ○ D ○ E ○ F ○ G ○

Questions 35-37

Instructions to follow

- Choose the correct letter A, B, C, or D.
- Write your answers in boxes 35-37 on your answer sheet.

35 According to Dr Paddy Ladd, Deafhood

A ○ is a more appropriate term than 'hard of hearing'.
B ○ doesn't colonise SLPs as much as 'deafness' does.
C ○ strives to get rid of the effects of colonisation.
D ○ contributes positively to the life and culture of deaf people.

36 Oralism suggests that

A ○ SLPs have no use for sign language.
B ○ SLPs don't belong in the hearing world.
C ○ hearing people are superior to SLPs.
D ○ SLPs are unable to acquire speech.

37 Aborigines in Australia are similar to deaf people because

A ○ eugenicists also tried to eradicate them.
B ○ they were also considered inferior by their oppressors.
C ○ their languages were also disrespected.
D ○ their languages were also colonised.

Questions 38-40

Instructions to follow

- Use NO MORE THAN TWO WORDS for each answer.

38 What should deaf people use to communicate with each other, according to deafhood?

39 Who has used oralism and audism to attack the deaf community?

40 What does the deaf community strive to achieve for sign language worldwide?

IELTS Reading Test 2

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

The Origins of Laughter

While joking and wit are uniquely human inventions, laughter certainly is not. Other creatures, including chimpanzees, gorillas and even rats, laugh. The fact that they laugh suggests that laughter has been around for a lot longer than we have.

There is no doubt that laughing typically involves groups of people. “Laughter evolved as a signal to others — it almost disappears when we are alone,” says Robert Provine, a neuroscientist at the University of Maryland. Provine found that most laughter comes as a polite reaction to everyday remarks such as “see you later”, rather than anything particularly funny. And the way we laugh depends on the company we’re keeping. Men tend to laugh longer and harder when they are with other men, perhaps as a way of bonding. Women tend to laugh more and at a higher pitch when men are present, possibly indicating flirtation or even submission.

To find the origins of laughter, Provine believes we need to look at play. He points out that the masters of laughing are children, and nowhere is their talent more obvious than in the boisterous antics, and the original context is play. Well-known primate watchers, including Dian Fossey and Jane Goodall, have long argued that chimps laugh while at play.

The sound they produce is known as a pant laugh. It seems obvious when you watch their behavior — they even have the same ticklish spots as we do. But after removing the context, the parallel between human laughter and a chimp's characteristic pant laugh is not so clear. When Provine played a tape of the pant laughs to 119 of his students, for example, only two guessed correctly what it was.

These findings underline how chimp and human laughter vary- When we laugh the sound is usually produced by chopping up a single exhalation into a series of shorter with one sound produced on each inward and outward breath. The question is: does this pant laughter have the same source as our own laughter? New research lends weight to the idea that it does. The findings come from Elke Zimmerman, head of the Institute for Zoology in Germany, who compared the sounds made by babies and chimpanzees in response to tickling during the first year of; their life. Using sound spectrographs to reveal the pitch and intensity of vocalizations, she discovered that chimp and human baby laughter follow broadly the same pattern. Zimmerman believes the closeness of baby laughter to chimp laughter supports the idea that laughter was around long before humans arrived on the scene. What started simply as a modification of breathing associated with enjoyable and play fulstarted simply as a modification of breathing associated with enjoyable and playful interactions has acquired a symbolic meaning as an indicator of pleasure.

Pinpointing when laughter developed is another matter. Humans and chimps share Pinpointing when laughter developed is another matter. Humans and chimps share a common ancestor that lived perhaps 8 million years ago, but animals might have been laughing long before that. More distantly related primates, including gorillas, laugh, and anecdotal evidence suggests that other social mammals can do too. Scientists are currently testing such stories with a comparative analysis of just how common laughter is

among animals. So far, though, the most compelling evidence for laughter beyond primates comes from research done by Jaak Panksepp from Bowling Green State University, Ohio, into the ultrasonic chirps produced by rats during play and in response to tickling.

All this still doesn't answer the question of why we laugh at all. One idea is that all this still doesn't answer the question of why we laugh at all. One idea is that laughter and tickling originated as a way of sealing the relationship between mother and child. Another is that the reflex response to tickling is protective, alerting us to the presence of crawling creatures that might harm us or compelling us to defend the parts of our bodies that are most vulnerable in hand-to-hand combat. But the idea that has gained the most popularity in recent years is that laughter in response to tickling is a way for two individuals to signal and test their trust in one another. This hypothesis starts from the observation that although a little tickle can be enjoyable, if it goes on too long it can be torture. By engaging in a bout of tickling, we put ourselves at the mercy of another individual, and laughing is what makes it a reliable signal of trust, according to Tom Flamson, a laughter researcher at the University of California, Los Angels. "Even in rats, laughter, tickle, play and trust are linked. Rats chirp a lot when they play," says Flamson. "These chirps can be aroused by tickling. And they get bonded to us as a result, which certainly seems like a show of trust."

We'll never know which animal laughed the first laugh, or why. But we can be sure it We'll never know which animal laughed the first laugh, or why. But we can be sure it wasn't in response to a prehistoric joke. The funny thing is that while the origins of laughter are probably quite serious, we owe human laughter and our language-based humor to the same unique skill. While other animals pant, we alone can control our breath well enough to produce the sound of laughter. Without that control there would also be no speech -

and no jokes to endure.

Questions 1-6

Instructions to follow

- Look at the following research findings and the list of people below.
- Match each finding with the correct person A, B, C or D.
- Write the correct letter, A, B, C or D, in boxes 1-6 on your answer sheet.
- **NB** You may use any letter more than once.

1 Babies and some animals produce laughter which sounds similar.

A ○ B ○ C ○ D ○

2 Primates are not the only animals who produce laughter.

A ○ B ○ C ○ D ○

3 Laughter can be used to show that we feel safe and secure with others.

A ○ B ○ C ○ D ○

4 Most human laughter is not a response to a humorous situation.

A ○ B ○ C ○ D ○

5 Animal laughter evolved before human laughter.

A ○ B ○ C ○ D ○

6 Laughter is a social activity.

A ○ B ○ C ○ D ○

List of people

A Provine

B Zimmerman

C Panksepp

D Flamson

Questions 7-10

Instructions to follow

- Complete the summary using the list of words, A-K, below.
- Write the correct letter, A-K, in boxes 7-10 on your answer sheet.

A Combat
B Chirps
C Pitch
D Origins
E Play
F Rats
G Primates
H Confidence
I Fear
J Babies
K Tickling

Some scientists believe that laughter first developed out of 7..... Research has revealed that human and chimp laughter may have the same 8..... Scientists have long been aware that 9.....laugh, but it now appears that laughter might be more widespread than once thought. Although the reasons why humans started to laugh are still unknown, it seems that laughter may result from the 10.....we feel with another person.

Questions 11-13

Instructions to follow

- Do the following statements agree with the information given in Reading Passage 1? In boxes 11-13 on your answer sheet, write

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

11 Primates lack sufficient breath control to be able to produce laughs the way humans do.

12 Both men and women laugh more when they are with members of the same sex

13 Chimpanzees produce laughter in a wider range of situations than rats do.

Section 2

Instructions to follow

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

Stress of Workload

A. How busy is too busy? For some it means having to miss the occasional long lunch; for others, it means missing lunch altogether. For a few, it is not being able to take a "sickie" once a month. Then there is a group of people for whom working every evening and weekend is normal, and frantic is the tempo of their lives. For most senior executives, workloads swing between extremely busy and frenzied. The vice-president of the management consultancy AT Kearney and its head of telecommunications for the Asia-Pacific region, Neil Plumridge, says his work weeks vary from a "manageable" 45 hours to 80 hours, but average 60 hours.

B. Three warning signs alert Plumridge about his workload: sleep, scheduling and family. He knows he has too much on when he gets less than six hours of sleep for three consecutive nights; when he is constantly having to reschedule appointments; "and the third one is on the family side", says Plumridge, the father of a three-year-old daughter, and expecting a second child in October. "If I happen to miss a birthday or anniversary, I know things are out of control." Being "too busy" is highly subjective. But for any individual, the perception of being too busy over a prolonged period can start showing up as stress: disturbed sleep, and declining mental and physical health. National workers' compensation figures show stress causes the most lost time of any workplace injury. Employees suffering stress are off work an average of 16.6 weeks. The effects of stress

are also expensive. Comcare, the Federal Government insurer, reports that in 2003-04, claims for psychological injury accounted for 7% of claims but almost 27% of claim costs. Experts say the key to dealing with stress is not to focus on relief – a game of golf or a massage – but to reassess workloads. Neil Plumridge says he makes it a priority to work out what has to change; that might mean allocating extra resources to a job, allowing more time or changing expectations. The decision may take several days. He also relies on the advice of colleagues, saying his peers' coach each other with business problems. "Just a fresh pair of eyes over an issue can help," he says.

C. Executive stress is not confined to big organisations. Vanessa Stoykov has been running her own advertising and public relations business for seven years, specializing in work for financial and professional services firms. Evolution Media has grown so fast that it debuted on the BRW Fast 100 list of fastest-growing small enterprises last year – just after Stoykov had her first child. Stoykov thrives on the mental stimulation of running her own business. "Like everyone, I have the occasional day when I think my head's going to blow off," she says. Because of the growth phase, the business is in, Stoykov has to concentrate on short-term stress relief – weekends in the mountains, the occasional "mental health" day – rather than delegating more work. She says: "We're hiring more people, but you need to train them, teach them about the culture and the clients, so it's actually more work rather than less."

D. Identify the causes: Jan Elsnera, Melbourne psychologist who specialises in executive coaching, says thriving on a demanding workload is typical of senior executives and other high-potential business people. She says there is no one-size-fits-all approach to stress: some people work best with high-adrenalin periods followed by quieter patches, while others thrive under sustained pressure. "We could take urine and blood hormonal measures and pass judgement of whether someone's physiologically stressed or not," she

says. “But that’s not going to give us an indicator of what their experience of stress is, and what the emotional and cognitive impacts of stress are going to be.”

E. Elsner’s practice is informed by a movement known as positive psychology, a school of thought that argues “positive” experiences – feeling engaged, challenged, and that one is making a contribution to something meaningful – do not balance out negative ones such as stress; instead, they help people increase their resilience over time. Good stress, or positive experiences of being challenged and rewarded, is thus cumulative in the same way as bad stress. Elsner says many of the senior business people she coaches are relying more on regulating bad stress through methods such as meditation and yoga. She points to research showing that meditation can alter the biochemistry of the brain and actually help people “retrain” the way their brains and bodies react to stress. “Meditation and yoga enable you to shift the way that your brain reacts, so if you get proficient at it, you’re in control.”

F. The Australian vice-president of AT Kearney, Neil Plumridge, says: “Often stress is caused by our setting unrealistic expectations of ourselves. I’ll promise a client I’ll do something tomorrow, and the [promise] another client the same thing, when I really know it’s not going to happen. I’ve put stress on myself when I could have said to the clients: ‘Why don’t I give that to you in 48 hours?’ The client doesn’t care.” Overcommitting is something people experience as an individual problem. We explain it as the result of procrastination or Parkinson’s law: that work expands to fill the time available. New research indicates that people may be hard-wired to do it.

G. A study in the February issue of the Journal of Experimental Psychology shows that people always believe they will be less busy in the future than now. This is a misapprehension, according to the authors of the report, Professor Gal Zauberman, of the University of North Carolina, and Professor John Lynch, of Duke University. “On average, an individual

will be just as busy two weeks or a month from now as he or she is today. But that is not how it appears to be in everyday life," they wrote. "People often make commitments long in advance that they would never make if the same commitments required immediate action. That is, they discount future time investments relatively steeply." Why do we perceive a greater "surplus" of time in the future than in the present? The researchers suggest that people underestimate completion times for tasks stretching into the future and that they are bad at imagining the future competition for their time.

Questions 14-18

Instructions to follow

- Use the information in the passage to match the people (listed A-D) with opinions or deeds below.
- Write the correct letter A-D, in boxes 14-18 on your answer sheet.
- **NB** You may use any letter more than once.

A Neil Plumridge

B Vanessa Stoykov

C Gal Zauberman

D Jan Elsnera

14 It is not correct that stress in the future will be eased more than now.

A ○ B ○ C ○ D ○

15 More people's ideas involved would be beneficial for stress relief

A ○ B ○ C ○ D ○

16 Stress leads to the wrong direction when trying to satisfy customers.

A ○ B ○ C ○ D ○

17 Work stress usually happens in the high level of a business.

A ○ B ○ C ○ D ○

18 Temporary holiday sometimes doesn't mean less work.

A ○ B ○ C ○ D ○

Questions 19-21

Instructions to follow

- Choose the correct letter, A, B, C or D.
- Write your answers in boxes 19-21 on your answer sheet.

19 Which of the following workplace stress is NOT mentioned according to Plumridge in the following option?

A ○ Not enough time spend on family
B ○ Inadequate time of sleep
C ○ Unable to concentrate on work
D ○ Alteration of appointment

20 Which of the following solution is NOT mentioned in helping reduce the work pressure according to Plumridge?

A ○ Allocate more personnel
B ○ Increase more time
C ○ Lower expectation
D ○ Do sports and massage

21 What is the point of view of Jan Elsnera towards work stress?

A Index somebody samples will be abnormal in a stressful experience
B Medical test can only reveal part of the data needed to cope with stress
C Emotional and cognitive affection is superior to a physical one
D One well a designed solution can release all stress

Questions 22-27

Instructions to follow

- Complete the following summary of the paragraphs of Reading Passage.
- Using NO MORE THAN TWO WORDS and/or A NUMBER from the Reading Passage for each answer.
- Write your answers in boxes 22-27 on your answer sheet.

Statistics from National worker's compensation indicate stress plays the most important role in 22 ..... which cause the time losses. Staffs take about 23..... for absence from work caused by stress. Not just time is our main concern but great expenses generated consequently. An official insurer wrote sometime that about 24..... of all claims were mental issues whereas nearly 27% costs in all claims. Sports such as 25 ....., as well as 26 ..... could be a treatment to release stress; However, specialists recommended another practical way out, analyse 27..... once again.

Section 3

Instructions to follow

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

How Fair is Fair Trade?

The fair-trade movement began in Europe in earnest in the post-war period, but only in the last 25 years has it grown to include producers and consumers in over 60 countries.

In the 1950s and 60s, many people in the developed world felt passionately about the enormous disparities between developed and developing countries, and they believed the system of international trade shut out African, Asian, and South American producers who could not compete with multinational companies or who came from states that, for political reasons, were not trading with the West. The catchphrase 'Trade Not Aid' was used by church groups and trade unions – early supporters of fair trade – who also considered that international aid was either a pittance or a covert form of subjugation. These days, much fair trade does include aid: developed-world volunteers offer their services, and there is free training for producers and their workers.

Tea, coffee, cocoa, cotton, flowers, handicrafts, and gold are all major fair-trade items, with coffee being the most recognisable, fund on supermarket shelves and at café chains throughout the developed world.

Although around two million farmers and workers produce fair-trade items, this is a tiny number in relation to total global trade. Still, fair-trade advocates maintain that the system has positively impacted upon many more people worldwide, while the critics claim

that if those two million returned to the mainstream trading system, they would receive higher prices for their goods or labour.

Fair trade is supposed to be a trade that is fair to producers. Its basic tenet is that developed-world consumers will pay slightly more for end products in the knowledge that developing-world producers have been equitably remunerated, and that the products have been made in decent circumstances. Additionally, the fair-trade system differs from that of the open market because there is a minimum price paid for goods, which may be higher than that of the open market. Secondly, a small premium, earmarked for community development, is added in good years; for example, coffee co-operatives in South America frequently receive an additional 25c per kilogram.

Lastly, purchasers of fair-trade products may assist with crop pre-financing or with the training of producers and workers, which could take the form of improving product quality, using environmentally friendly fertilisers, or raising literacy. Research has shown that non-fair-trade farmers copy some fair-trade farming practices, and, occasionally, encourage social progress. In exchange for ethical purchase and other assistance, fair-trade producers agree not to use child or slave labour, to adhere to the United Nations Charter on Human Rights, to provide safe workplaces, and to protect the environment despite these not being legally binding in their own countries. However, few non-fair-trade farmers have adopted these practices, viewing them as little more than rich-world conceits.

So that consumers know which products are made under fair-trade conditions, goods are labelled, and, these days, a single European and American umbrella organisation supervises labelling, standardisation, and inspection.

While fair trade is increasing, the system is far from perfect. First and foremost, there are

expenses involved in becoming a fair-trade-certified producer, meaning the desperately poor rarely participate, so the very farmers fair-trade advocates originally hoped to support are excluded. Secondly, because conforming to the standards of fair-trade certification is costly, some producers deliberately mislabel their goods. The fair-trade monitoring process is patchy, and unfortunately, around 12% of fair-trade-labelled produce is nothing of the kind.

Next, a crop may genuinely be produced under fair-trade conditions, but due to a lack of demand cannot be sold as fair trade, so goes onto the open market, where prices are mostly lower. It is estimated that only between 18-37% of fair-trade output is actually sold as fair trade. Sadly, there is little reliable research on the real relationship between costs incurred and revenue for fair-trade farmers, although empirical evidence suggests that many never realise a profit. Partly, reporting from producers is inadequate, and ways of determining profit may not include credit, harvesting, transport, or processing.

Sometimes, the price paid to fair-trade producers is lower than that of the open market, so while a crop may be sold, elsewhere it could have earnt more, or where there are profits, they are often taken by the corporate firms that buy the goods and sell them on to retailer.

There are problems with the developed-world part of the equation too. People who volunteer to work for fair-trade concerns may do so believing they are assisting farmers and communities, whereas their labour serves to enrich middlemen and retailers. Companies involved in West African cocoa production have been criticised for this. In the developed world, the right to use a fair-trade logo is also expensive for packers and retailers, and sometimes a substantial amount of the money received from sale is ploughed back into marketing.

In richer parts of the developed world, notably in London, packers and retailers charge high prices for fair-trade products. Consumers imagine they are paying so much because more money is returned to producers when profit-taking by retailers or packers is a more likely scenario. One UK café chain is known to have passed on 1.6% of the extra 18% is charged for fair-trade coffee to producers. However, this happens with other items at the supermarket or cafe, so perhaps consumers are naive to believe fair-traders behave otherwise.

In addition, there are struggling farmers in rich countries, too, so some critics think fair-trade associations should certify them. Other critics find the entire fair-trade system flawed – nothing more than a colossal marketing scam- and they would rather assist the genuinely poor in more transparent ways, but this criticism may be overblown since fair trade has endured for and been praised in the developing world itself.

Questions 28-32

Instructions to follow

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

28 What was an early slogan about addressing the imbalance between the developed and developing worlds?

29 What is probably the most well-known fair-trade commodity?

30 According to the writer, in terms of total global trade, what do fair-trade producers represent?

31 How do its supporters think fair trade has affected many people?

32 What do its critics think fair-trade producers would get if they went back to mainstream trade?

Questions 33-36

Instructions to follow

- Complete each sentence with the correct ending, A-H, below.
- Write the correct letter A-H, in boxes 33-36 on your answer sheet.

33 Consumers of fair-trade products are happy

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

34 The fair-trade system may include

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

35 Some fair-trade practices

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

36 Fair-trade producers must adopt international employment standards

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

A loans or training for producers and employees.

B although they may not be obliged to do so in their own country.

C for the various social benefits fair trade brings.

D to pay more for what they see as ethical products.

E has influenced non-fair-trade producers.

F because these are United Nations obligations.

G too much corruption.

H have been adopted by non-fair-trade producers.

Questions 37-40

Instructions to follow

- Do the following statements agree with the claims of the writer in Reading Passage 3?
  In boxes 37-40 on your answer sheet, write
  YES if the statement agrees with the claims of the writer
  NO if the statement contradicts the claims of the writer
  NOT GIVEN if it is impossible to say what the writer thinks about this.

37 The fair-trade system assists farmers who are extremely poor.

38 Some products labelled as fair-trade is in fact not.

39 UK supermarkets and cafes should not charge such high prices for fair-trade items.

40 Fair trade is mainly a marketing play and not a valid way of helping the poor.

IELTS Reading Test 3

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

Pollution in the Bay

A. Pouring water into the sea sounds harmless enough. But in Florida Bay, a large and shallow section of the Gulf of Mexico that lies between the southern end of the Everglades and the Florida Keys, it is proving highly controversial. That is because researchers are divided over whether it will help or hinder the plants and animals that live in the bay.

B. What is at risk is the future of the bay's extensive beds of seagrasses. These grow on the bay's muddy floor and act as nurseries for the larvae of shrimps, lobsters and fish – many of the important sport and commercial-fishing species. Also in danger is an impressive range of coral reefs that run the length of the Florida Keys and form the third-largest barrier reef in the world. Since the 1980s, coral cover has dropped by 40%, and a third of the coral species have gone. This has had a damaging effect on the animals that depend on the reef, such as crabs, turtles and nearly 600 species of fish.

C. What is causing such ecological change is a matter of much debate. And the answer is of no small consequence. This is because the American government is planning to devote $8 billion over the next 30 years to revitalise the Everglades. Seasonal freshwater flows into the Everglades are to be restored in order to improve the region's health. But they will

then run off into the bay.

D. Joseph Zieman, a marine ecologist at the University of Virginia, thinks this is a good idea. He believes that a lack of fresh water in the bay is its main problem. The blame, he says, lies with a century of drainage in the Everglades aimed at turning the marshes into farmland and areas for development.

This has caused the flow of fresh water into Florida Bay to dwindle, making the water in the bay, overall, more saline. This, he argues, kills the seagrasses, and as these rots, nutrients are released that feed the microscopic plants and animals that live in the water. This, he says, is why the bay's once crystal-clear waters often resemble pea soup. And in a vicious circle, these turbid blooms block out sunlight, causing more seagrasses to die and yet more turbidity.

E. Brian Lapointe, a marine scientist at the Harbour Branch Oceanographic Institution at Fort Pierce in Florida, disagrees. He thinks seagrasses can tolerate much higher levels of salinity than the bay actually displays. Furthermore, he notes that when freshwater flows through the Everglades were increased experimentally in the 1990s, it led to massive plankton blooms.

Freshwater running off from well-fertilised farmlands, he says, caused a fivefold rise in nitrogen levels in the bay. This was like pouring fuel on a fire. The result was mass mortality of seagrasses because of increased turbidity from the plankton. Dr Lapointe adds that, because corals thrive only in waters where nutrient levels are low, restoring freshwater rich in nitrogen will do more damage to the reef.

F. It is a plausible theory. The water flowing off crops that are grown on the750,000 acres of heavily fertilised farmland on the northern edge of the Everglades is rich in nitrogen,

half of which ends up in the bay. But Bill Kruczynski, of America's Environmental Protection Agency, is convinced that nitrogen from farmlands is not the chief problem. Some coral reefs well away from any nitrogen pollution are dying and, curiously, a few are thriving. Dr Kruczynski thinks that increased nutrients arriving from local sewage discharges from the thousands of cesspits along the Florida Keys are part of the problem.

G. Such claims and counterclaims make the impact of the restoration plan difficult to predict. If increased salinity is the main problem, the bay's ecology will benefit from the Everglades restoration project. If, however, nitrogen is the problem, increasing the flow of freshwater could mate matters much worse.

H. If this second hypothesis proves correct, the cure is to remove nitrogen from farmland or sewage discharges, or perhaps both. Neither will be easy. Man-made wetlands, at present, being built to reduce phosphate runoff into the bay—also from fertilisers—would need an algal culture (a sort of contained algal bloom) added to them to deal with discharges from farmlands.

That would be costly. So too would be the replacement of cesspits with proper sewerage—one estimate puts the cost at $650m. Either way, it is clear that when, on December 1st, 3,000 square miles of sea around the reef are designated as a "protective zone" by the deputy secretary of commerce, Sam Bodman, this will do nothing to protect the reef from pollution.

I. Some argue, though, that there is a more fundamental flaw in the plans for the bay: the very idea of returning it to a Utopian ideal before man wrought his damage. Nobody knows what Florida Bay was like before the 1950s when engineers cut the largest canals in the Everglades and took most of the water away. Dr Kruczynski suspects it was more like an estuary. The bay that many people wish to re-create could have been nothing more

than a changing phase in the bay's history.

J. These arguments do not merely threaten to create ecological problems but economic ones as well. The economy of the Florida Keys depends on tourism—the local tourist industry has an annual turnover of $2.5 billion. People come for fishing-boat trips, for manatee watching, or for scuba diving and snorkeling to view the exotically coloured corals. If the plan to restore the Everglades makes problems in the bay and the reef worse, it could prove a very expensive mistake.

Questions 1-4

Instructions to follow

- The Reading Passage has seven paragraphs A-J. Write paragraph contains the following information?

1 See grass turned to be more resistant to the saline water level in the Bay

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○ J ○

2 Significance of finding a specific reason in controversy

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○ J ○

3 Expensive proposals raised to solve the nitrogen dilemma

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○ J ○

4 A statistic of ecological changes in both the coral area and species

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○ J ○

Questions 5-8

Instructions to follow

- Use the information in the passage to match the people (listed A-C) with opinions or deeds below.
- Write the appropriate letters A-C.

A Bill Kruczynski

B Brian Lapointe

C Joseph Zieman

5 Drainage system in everglades actually results in high salty water in the bay.

A ○ B ○ C ○

6 Restoring water high in nitrogen level will make more ecological side effect

A ○ B ○ C ○

7 High nitrogen levels may be caused by the nearby farmland.

A ○ B ○ C ○

8 Released sewage rather than nutrients from agricultural area increase the level of Nitrogen.

A ○ B ○ C ○

Questions 9-13

Instructions to follow

- Do the following statements agree with the information given in Reading Passage 2.
  TRUE if the statement is true
  FALSE if the statement is false
  NOT GIVEN if the information is not given in the passage

9 Everyone agrees with “pouring water into the sea is harmless enough” even in the Florida Bay area.

10 Nitrogen was poured in from different types of crops as water flows through.

11 Everglade restoration project can be effective regardless of the cause of the pollution.

12 Human has changed Florida Bay where old image before 1950s is unrecalled.

13 Tourism contributes fundamentally to the Florida Bay area.

Section 2

Instructions to follow

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

Griffith and American films

Movies are key cultural artefacts that offer a window into American cultural and social history. A mixture of art, business, and popular entertainment, the popular entertainment, the movies provide a host of insights into Americans' shifting ideas, fantasies, and preoccupations.

A. Many films of the early silent era dealt with gender relations. Before 1905, as Kathy Peiss has argued, movie screens were filled with salacious sexual imagery and risque humor, drawn from burlesque halls and vaudeville theaters. Early films offered many glimpses of women disrobing or of passionate kisses. As the movies' female audience grew, sexual titillation and voyeurism persisted. But an ever-increasing number of the film dealt with the changing work and sexual roles of women in a more sophisticated manner.

While D.W. Griffith's films presented an idealized picture of the frail Victorian child-woman and showed an almost obsessive preoccupation with female honor and chastity, other silent movies presented quite different images of femininity. These ranged from the exotic, sexually aggressive vamp to the athletic, energetic "serial queen"; the street-smart urban working gal, who repels the sexual advances of her lascivious boss; and cigarette-smoking, alcohol drinking chorus girls or burlesque queens.

B. In early 1910, director D.W. Griffith was sent by the Biograph Company to the west coast with his acting troupe, consisting of actors Blanche Sweet, Lillian Gish, Mary Pickford, Lionel Barrymore, and others. While there, the company decided to explore new territories, traveling several miles north to Hollywood, a little village that was friendly and enjoyed the movie company filming there. By focusing the camera on particular actors and actresses, Griffith inadvertently encouraged the development of the star system. As early as 1910, newspapers were deluged with requests for actors' names. But most studios refused to divulge their identities, fearing the salary demands of popular performers.

As one industry observer put it, "In the 'star' your producer gets not only a 'production' value …. but a 'trademark' value, and an 'insurance' value which are … very potent in guaranteeing the sale of this product." As the star system emerged, salaries soared. In the course of just two years, the salary of actress Mary Pickford rose from less than $400 a week in 1914 to $10,000 a week in 1916. This action made Griffith believe the big potential in the movie industry. Thus, many competitors completely copied the same system as Griffith used, for the considerable profits. Additionally, they also studied the theory and methods which Griffith suggested.

C. From the moment America entered the war, Hollywood feared that the industry would be subject to heavy-handed government censorship. But the government itself wanted no repeat of World War I, when the Committee on Public Information had whipped up anti-German hysteria and oversold the war as "a Crusade not merely to re-win the tomb of Christ, but to bring back to earth the rule of right, the peace, goodwill to men and gentleness he taught."

D. The formation of the movie trust ushered in a period of rationalization within the film industry. Camera and projecting equipment were standardized; film rental fees were

fixed; theaters were upgraded; which improved the quality of movies by removing damaged prints from circulation. This was also a period of intense artistic and technical innovation, as pioneering directors like David Wark Griffith and others created a new language of film and revolutionized screen narrative.

E. With just six months of film experience, Griffith, a former stage actor, was hired as a director by the Biograph Company and promised $50 a week and one-twentieth of a cent for every foot of film sold to a rental exchange. Each week, Griffith turned out two or three one-reelers. While earlier directors had used such cinematic devices as close-ups, slow motion, fade-ins and fade-outs, lighting effects, and editing before, Griffith's great contribution to the movie industry was to show how these techniques could be used to create a wholly new style of storytelling, distinct from the theater. Griffith's approach to movie storytelling has been aptly called "photographic realism."

This is not to say that he merely wished to record a story accurately; rather he sought to convey the illusion of realism. He demanded that his performers act less in a more lifelike manner, avoiding the broad, exaggerated gestures and pantomiming of emotions that characterized the nineteenth-century stage. He wanted his performers to take on a role rather than directly addressing the camera.

Above all, he used close-ups, lighting, editing, and other cinematic techniques convey suspense and other emotions and to focus the audience's attention on individual performers.

F. During the 1920s and 1930s, a small group of film companies consolidated their control. Known as the "Big Five" – Paramount, Warner Brothers, RKO, 20th Century-Fox, and Lowe's (MGM) and the "Little Three" – Universal, Columbia, and United Artists, they formed fully integrated companies. The old film company's opposition was shocked by

new tycoons. The confusion of tongues in the foreign version of American films deepened when American directors themselves embarked on the shooting of the new version.

They did not usually speak Spanish (or the given target language) and, at that time, there were only a few translators at the studio's disposal. For this reason, it was more general to contract Spanish directors, actors, and screenwriters to produce American films in Spanish for Latin American audiences and for the public in the Iberian Peninsula. Hollywood had depended on overseas markets for as much as 40 percent of its revenue. But in an effort to nurture their own film industries and prevent an excessive outflow of dollars, Britain, France, and Italy imposed stiff import tariffs and restrictive quotas on imported American movies.

G. A basic problem facing today's Hollywood is the rapidly rising cost of making and marketing a movie: an average of $40 million today. The immense cost of producing movies has led the studios to seek guaranteed hits: blockbuster loaded with high-tech special effects, sequels, and remakes of earlier movies, foreign films, and even old TV shows. Hollywood has also sought to cope with rising costs by focusing ever more intently on its core audiences. Since the mid-1980s, the movie-going audience has continued to decrease in size.

Ticket sales fell from 1.2 billion in 1983 to 950 million in 1992, with the biggest drop occurring among adults. And since over half of Hollywood's profits are earned overseas, the target market has to be changed due to the increasing costs and salary of making a film. The industry has concentrated much of its energy on crude action films easily understood by an international audience, featuring stars like Arnold Schwarzenegger and Sylvester Stallone.

Questions 14-19

Instructions to follow

- The 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-vii, in boxes 14-19 on your answer sheet.

List of Headings

i. Detailed description for a film system

ii. Griffith's contribution to American films

iii. The gender in the development of American film

iv. Change the view of the American movie

v. People's reaction to making movies in the war period

vi. The increasing market of the film in society

vii. Griffith improved gender recognition in society

14 Paragraph A

15 Paragraph B

16 Paragraph C

17 Paragraph D

18 Paragraph E

19 Paragraph F

Questions 20-23

Instructions to follow

- Use the options listed below to match it with appropriate information (listed A-C).
- Write the appropriate letters A, B, C or D in boxes 20-23 on your answer sheet.

A old company's opposition

B huge drop happens among adults

C the pressure to change its market

D completely copy his system

20 Griffith's successful in the 1910s, led his rivals

A ○ B ○ C ○ D ○

21 The growing costs and salary in Hollywood which shows it has

A ○ B ○ C ○ D ○

22 The increasing new movie industries have a big impact on

A ○ B ○ C ○ D ○

23 In 1992, ticket sales declined dramatically, due to

A ○ B ○ C ○ D ○

Questions 24-26

Instructions to follow

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

24 **Why Griffith believe the potential in making movies?**

A The gender development in American films
B He used the star system successfully
C He prefers advanced movie techniques
D He earns lots of money

25 **What is other competitors' reaction to Griffith?**

A Adopt Griffith's theory and methods in making films
B Complete copy his theory and methods
C Try to catch up with their innovations
D Find a new system against Griffith

26 **What is the great change in films industries during the 1920s and 1930s?**

A Try to seek the high-tech special efforts
B Dismiss the needs of overseas audiences
C Changed its goal market
D Improved the foreign version of American movies

Section 3

Instructions to follow

- You should spend 20 minutes on Questions 27-40 which are based on Reading Passage 3

Global Warming in New Zealand

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

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

Among all the calamities posed be drought, moisture deficit ranks the first. Moisture deficit is the gap between the water plants need during the growing season and the water the earth can offer. Measures of moisture deficit were at their highest since the 1970s in New Zealand. Meanwhile, ecological analyses clearly show moisture deficit is imposed at

different growth stage of crops. If moisture deficit occurs around a crucial growth stage, it will cause about 22% reduction in grain yield as opposed to moisture deficit at vegetative phase.

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

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

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

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

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

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

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

Tackling the problems of global warming is never easy in New Zealand, because records show the slow process of global warming may have a different impact on various regions. For New Zealand, the emission of carbon dioxide only accounts for 0.5% of the world's

total, which has met the governmental standard. However, New Zealand's effort counts only a tip of the iceberg. So far, global warming has been a world issue that still hangs in an ambiguous future.

Questions 27-32

Instructions to follow

- Choose the correct letter A, B, C or D.
- Write the correct letter in boxes 27-32 on your answer sheet.

27 What is the main idea of the first paragraph?

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

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

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

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

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

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

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

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

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

29 What does “moisture deficit” mean to the grain and crops?

A The growing condition will be very tough for crops.

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

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

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

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

A The skiing station may lower the altitude of skiing

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

C The snowfall may increase in part of skiing station.

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

31 Cumulative changes over a long period of time in mass balance will lead to

A alterations in the volume and thickness of glaciers.

B faster changes in internal deformation and basal sliding.

C larger length of glaciers.

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

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

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

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

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

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

Questions 33-35

Instructions to follow

- Complete the summary below. Choose NO MORE THAN TWO WORDS from the passage.

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

Questions 36-40

Instructions to follow

- Do the following statements agree with the claims of the writer in Reading Passage 3? In boxes 36-40 on your answer sheet, write
  YES if the statement agrees with the 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

36 Farmers are less responsive to climate change than agriculturists.

37 Agricultural sector refuses to take actions to deal with climate change.

38 Turtle is often unaffected by climate change.

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

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

IELTS Reading Test 4

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

The World Wide Web from its origins

Science inspired the World Wide Web, and the Web has responded by changing science.

'Information Management: A Proposal'. That was the bland title of a document written in March 1989 by a then little- known computer scientist called Tim Berners-Lee, who was working at CERN, Europe's particle physics laboratory, near Geneva. His proposal, modestly called the World Wide Web, has achieved far more than anyone expected at the time.

In fact, the Web was invented to deal with a specific problem. In the late 1980s, CERN was planning one of the most ambitious scientific projects ever, the Large Hadron Collider*, or LHC. As the first few lines of the original proposal put it, 'Many of the discussions of the future at CERN and the LHC end with the question "Yes, but how will we ever keep track of such a large project?" This proposal provides an answer to such questions.

The Web, as everyone now knows, has many more uses than the original idea of linking electronic documents about particle physics in laboratories around the world. But among all the changes it has brought about, from personal social networks to political campaigning, it has also transformed the business of doing science itself, as the man who

invented it hoped it would.

It allows journals to be published online and links to be made from one paper to another. It also permits professional scientists to recruit thousands of amateurs to give them a hand. One project of this type, called GalaxyZoo, used these unpaid workers to classify one million images of galaxies into various types (spiral, elliptical and irregular).

This project, which was intended to help astronomers understand how galaxies evolve, was so successful that a successor has now been launched, to classify the brightest quarter of a million of them in finer detail. People working for a more modest project called Herbaria home examine scanned images of handwritten notes about old plants stored in British museums. This will allow them to track the changes in the distribution of species in response to climate change.

Another new scientific application of the Web is to use it as an experimental laboratory. It is allowing social scientists, in particular, to do things that were previously impossible. In one project, scientists made observations about the sizes of human social networks using data from Facebook. A second investigation of these networks, produced by Bernardo Huberman of HP Labs, Hewlett-Packard's research arm in Pato Alto, California, looked at Twitter, a social networking website that allows people to post short messages to long lists of friends.

At first glance, the networks seemed enormous – the 300,000 Twitterers sampled had 80 friends each, on average (those on Facebook had 120), but some listed up to 1,000. Closer statistical inspection, however, revealed that the majority of the messages were directed at a few specific friends. This showed that an individual's active social network is far smaller than his 'clan'.

Dr Huberman has also helped uncover several laws of web surfing, including the number of times an average person will go from web page to web page on a given site before giving up, and the details of the 'winner takes all' phenomenon, whereby a few sites on a given subject attract most of the attention, and the rest get very little.

Scientists have been good at using the Web to carry out research. However, they have not been so effective at employing the latest web-based social-networking tools to open up scientific discussion and encourage more effective collaboration. Journalists are now used to having their articles commented on by dozens of readers. Indeed, many bloggers develop and refine their essays as a result of these comments.

Yet although people have tried to have scientific research reviewed in the same way, most researchers only accept reviews from a few anonymous experts. When Nature, one of the world's most respected scientific journals, experimented with open peer review in 2006, the results were disappointing. Only 5% of the authors it spoke to agreed to have their article posted for review on the Web – and their instinct turned out to be right, because almost half of the papers attracted no comments. Michael Nielsen, an expert on quantum computers, belongs to a new wave of scientist bloggers who want to change this. He thinks the reason for the lack of comments is that potential reviewers lack incentive.

adapted from The Economist

** The Large Hadron Collider (LHC) is the world's largest particle accelerator and collides particle beams. It provides information on fundamental questions of physics.*

Questions 1-6

Instructions to follow

- Do the following statements agree with the information given in the reading passage? 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 Tim Berners-Lee was famous for his research in physics before he invented the World Wide Web.

2 The original intention of the Web was to help manage one extremely complex project.

3 Tim Berners-Lee has also been active in politics.

4 The Web has allowed professional and amateur scientists to work together.

5 The second galaxy project aims to examine more galaxies than the first.

6 Herbaria home's work will help to reduce the effects of climate change.

Questions 7-10

Instructions to follow

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

Social networks and Internet use

Web used by Social scientists (including Dr Huberman) to investigate the 7 **.....** of social networks.

Most 8 **.....** intended for limited number of people – not everyone on list.

Dr Huberman has also investigated:

– 9 ..... to discover how long people will spend on a particular website,

– why a small number of sites get much more 10 ..... than others on same subject.

Questions 11-13

Instructions to follow

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

11 Whose writing improves as a result of feedback received from readers?

12 What type of writing is not reviewed extensively on the Web?

13 Which publication invited authors to publish their articles on the World Wide Web?

Section 2

Instructions to follow

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

The Motor Car

A. There are now over 700 million motor vehicles in the world – and the number is rising by more than 40 million each year. The average distance driven by car users is growing too – from 8 km a day per person in western Europe in 1965 to 25 km a day in 1995. This dependence on motor vehicles has given rise to major problems, including environmental pollution, depletion of oil resources, traffic congestion and safety.

B. While emissions from new cars are far less harmful than they used to be, city streets and motorways are becoming more crowded than ever, often with older trucks, buses and taxis, which emit excessive levels of smoke and fumes. This concentration of vehicles makes air quality in urban areas unpleasant and sometimes dangerous to breathe. Even Moscow has joined the list of capitals afflicted by congestion and traffic fumes. In Mexico City, vehicle pollution is a major health hazard.

C. Until a hundred years ago, most journeys were in the 20 km range, the distance conveniently accessible by horse. Heavy freight could only be carried by water or rail. The invention of the motor vehicle brought personal mobility to the masses and made rapid freight delivery possible over a much wider area. Today about 90 percent of inland freight in the United Kingdom is carried by road. Clearly, the world cannot revert to the horse-drawn wagon. Can it avoid being locked into congested and polluting ways of transporting

people and goods?

D. In Europe, most cities are still designed for the old modes of transport. Adaptation to the motor car has involved adding ring roads, one-way systems and parking lots. In the United States, more land is assigned to car use than to housing. Urban sprawl means that life without a car is next to impossible. Mass use of motor vehicles has also killed or injured millions of people. Other social effects have been blamed on the car such as alienation and aggressive human behaviour.

E. A 1993 study by the European Federation for Transport and Environment found that car transport is seven times as costly as rail travel in terms of the external social costs it entails such as congestion, accidents, pollution, loss of cropland and natural habitats, depletion of oil resources, and so on. Yet cars easily surpass trains or buses as a flexible and convenient mode of personal transport. It is unrealistic to expect people to give up private cars in favour of mass transit.

F. Technical solutions can reduce the pollution problem and increase the fuel efficiency of engines. But fuel consumption and exhaust emissions depend on which cars are preferred by customers and how they are driven. Many people buy larger cars than they need for daily purposes or waste fuel by driving aggressively. Besides, global car use is increasing at a faster rate than the improvement in emissions and fuel efficiency which technology is now making possible.

G. One solution that has been put forward is the long-term solution of designing cities and neighbourhoods so that car journeys are not necessary – all essential services being located within walking distance or easily accessible by public transport. Not only would this save energy and cut carbon dioxide emissions, it would also enhance the quality of community life, putting the emphasis on people instead of cars. Good local government

is already bringing this about in some places. But few democratic communities are blessed with the vision – and the capital – to make such profound changes in modern lifestyles.

H. A more likely scenario seems to be a combination of mass transit systems for travel into and around cities, with small 'low emission' cars for urban use and larger hybrid or lean burn cars for use elsewhere. Electronically tolled highways might be used to ensure that drivers pay charges geared to actual road use. Better integration of transport systems is also highly desirable – and made more feasible by modern computers. But these are solutions for countries which can afford them. In most developing countries, old cars and old technologies continue to predominate.

Questions 14-19

Instructions to follow

- Reading Passage 2 has eight paragraphs (A-H). Which paragraphs concentrate on the following information?
- Write the appropriate letters (A-H) in boxes 14-19 on your answer sheet.
- NB You need to write only ONE letter for each answer.

14 a comparison of past and present transportation methods

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

15 how driving habits contribute to road problems

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

16 the relative merits of cars and public transport

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

17 the writer's own prediction of future solutions

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

18 the increasing use of motor vehicles

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

19 the impact of the car on city development

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

Questions 20-26

Instructions to follow

- Do the following statements agree with the information given in Reading Passage 2?
  In boxes 20-26 on your answer sheet, write
  YES if the statement agrees with the information
  NO if the statement contradicts the information
  NOT GIVEN if there is no information on this in the passage

20 Vehicle pollution is worse in European cities than anywhere else.

21 Transport by horse would be a useful alternative to motor vehicles.

22 Nowadays freight is not carried by water in the United Kingdom.

23 Most European cities were not designed for motor vehicles.

24 Technology alone cannot solve the problem of vehicle pollution.

25 People's choice of car and attitude to driving is a factor in the pollution problem.

26 Redesigning cities would be a short-term solution.

Section 3

Instructions to follow

- You should spend 20 minutes on Questions 27-40 which are based on Reading Passage 3

Carbon Capture and Storage

High coal dependence

Renewable energy is much discussed, but coal still plays the greatest role in the generation of electricity, with recent figures from the International Energy Agency showing that China relies on it for 79% of its power, Australia for 78%, and the US for 45%. Germany has less reliance at 41%, which is also the global average. Furthermore, many countries have large, easily accessible deposits of coal, and numerous highly skilled miners, chemists, and engineers. Meanwhile, 70% of the world's steel production requires coal, and plastic and rayon are usually coal derivatives.

Currently, coal-fired power plants fed voracious appetites, but they produce carbon dioxide (CO_2) in staggering amounts. Urbanites may grumble about an average monthly electricity bill of $113, yet they steadfastly ignore the fact that they are not billed for the 6-7 million metric tons of CO_2 their local plant belches out, which contribute to the 44% of global CO_2 levels from fossil-fuel emissions. Yet, as skies fill with smog and temperatures soar, people crave clean air and cheap power.

The Intergovernmental Panel on Climate Change that advises the United Nations has testified that the threshold of serious harm to the Earth's temperature is a mere 2° Celsius above current levels, so it is essential to reduce carbon emissions by 80% over the next

30 years, even as demand for energy will rise by 50%, and one proposal for this is the adoption of carbon capture and storage (CCS).

Underground carbon storage

Currently, CO2 storage, or sequestration as it is known, is practised by the oil and gas industry, where CO2 is pumped into oil fields to maintain pressure and ease extraction – one metric ton dissolves out about three barrels, or separated from natural gas and pumped out of exhausted coal fields or other deep seams. The CO2 remains underground or is channeled into disused sandstone reservoirs. However, the sale of oil and natural gas is profitable, so the $17-per-ton sequestration cost is easily borne. There is also a plan for the injection of CO2 into saline aquifers, 1,000 meters beneath the seabed, to prevent its release into the atmosphere.

Carbon capture

While CO2 storage has been accomplished, its capture from power plants remains largely hypothetical, although CCS plants throughout Western Europe and North America are on the drawing board.

There are three main forms of CCS: pre-combustion, post-combustion, and oxy-firing. In a 2012 paper from the US Congressional Budget Office (CBO), post-combustion capture was viewed most favourably since existing power plants can be retrofitted with it, whereas pre-combustion and oxy-firing mean the construction of entirely new plants. However, pre-combustion and oxy-firing remove more CO2 than post-combustion and generate more electricity.

Post-combustion capture means CO2 is separated from gas after coal is burnt but before electricity is generated, while in oxy-firing, coal is combusted in pure oxygen. In pre-

combustion, as in an Integrated Gasification Combined Cycle system (IGCC), oxygen, coal, and water ae burnt together to produce a synthetic gas called Syngas – mainly hydrogen – which drives two sets of turbines, firstly gas-driven ones, then, as the cooling Syngas travel through water, steam-driven ones. Emissions from this process contain around ten percent of the CO2 that burning coal produces.

The pros and cons of CCS

Several countries are keen to scale up CCS as it may reduce carbon emissions quickly, and powerful lobby groups for CCS exist among professionals in mining and engineering. Foundries and refineries that produce steel and emit carbon may also benefit, and the oil and gas industry is interested because power-plant equipment consumes their products. In addition, recent clean energy acts in many countries mandate that a percentage of electricity be generated by renewables or by more energy-efficient systems, like CCS.

As with desalination, where powerful lobbies wield influence, states sometimes find it easier to engage in large projects involving a few players rather than change behaviours on a more scattered household scale. Furthermore, replacing coal with zero-emission photovoltaic (PV) cells to produce solar energy would require covering an area nearly 20,720 square kilometres, roughly twice the size of Lebanon or half of Denmark.

Still, there are many reservations about CCS. Principally, it is enormously expensive: conservative estimates put the electricity it generates at more than five times the current retail price. As consumers are unlikely to want to bear this price hike, massive state subsidies would be necessary for CCS to work.

The capital outlay of purchasing equipment for retrofitting existing power plants is high enough, but the energy needed to capture CO2 means one third more coal must be burnt,

and building new CCS plants is at least 75% more expensive than retro-fitting.

Some CCS technology is untried, for example, the Syngas-driven turbines in an IGCC system have not been used on an industrial scale. Post capture, CO2 must be compressed into a supercritical liquid for transport and storage, which is also costly. The Qatar Carbonates and Carbon Storage Research Centre predicts 700 million barrels per day of this liquid would be produced if CCS were adopted modestly. It is worth noting that current oil production is around 85 million barrels per day, so CCS would produce *eleven times* more waste for burial than oil that was simultaneously being extracted.

Sequestration has been used successfully, but there are limited coal and oil fields where optimal conditions exist. In rock that is too brittle, earthquakes could release the CO2. Moreover, proposals to store CO2 in saline aquifers are just that – proposals: sequestration has never been attempted in aquifers.

Most problematic of all, CCS reduces carbon emissions but does not end them, rendering it a medium-term solution.

Alternatives

There are at least four reasonably-priced alternatives to CCS. Firstly, conventional pulverised coal power plants are undergoing redesign so more electricity can be produced from less coal. Before coal is phased out – as ultimately it will have to be – these plants could be more cost-effective. Secondly, hybrid plants using natural gas and coal could be built. Thirdly, natural gas could be used on its own. Lastly, solar power is fast gaining credibility.

In all this, an agreed measure of cost for electricity generation must be used. This is called a levelized cost of energy (LCOE) – an average cost of producing electricity over the

lifetime of a power plant, including construction, financing, and operation, although pollution is not counted. In 2012, the CBO demonstrated that a new CCS plant had an LCOE of about $0.09-0.15 per kilowatt-hour (kWh), but according to the US Energy Information Administration, the LCOE from a conventional natural gas power plant without CCS is $0.0686/kWh, making it the cheapest way to produce clean energy.

Solar power costs are falling rapidly. In 2013, the Los Angeles Department of Water and Power reported that energy via a purchase agreement from a large solar plant was $0.095/kWh, and Greentech Media, a company that reviews environmental projects, found a 2014 New Mexico solar project that generates power for $0.0849/kWh.

Still, while so much coal and so many coal-fired plants exist, decommissioning them all may not be realistic. Whatever happens, the conundrum of cheap power and clean air may remain unsolved for some time.

Questions 27-28

Instructions to follow

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

27 What is the global average for electricity generated from coal?

A 41%
B 44%
C 49%
D 70%

28 How much does the average American pay each month for CO2 produced by a local power plant?

A $17
B $80
C $113
D Nothing

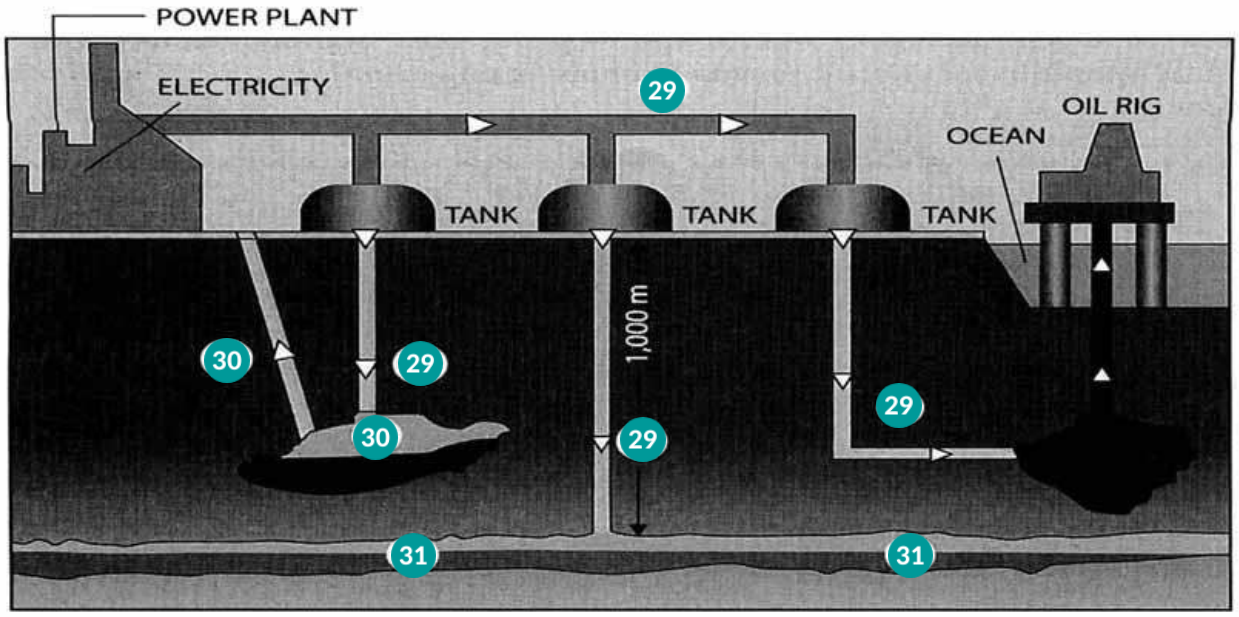
Questions 29-34

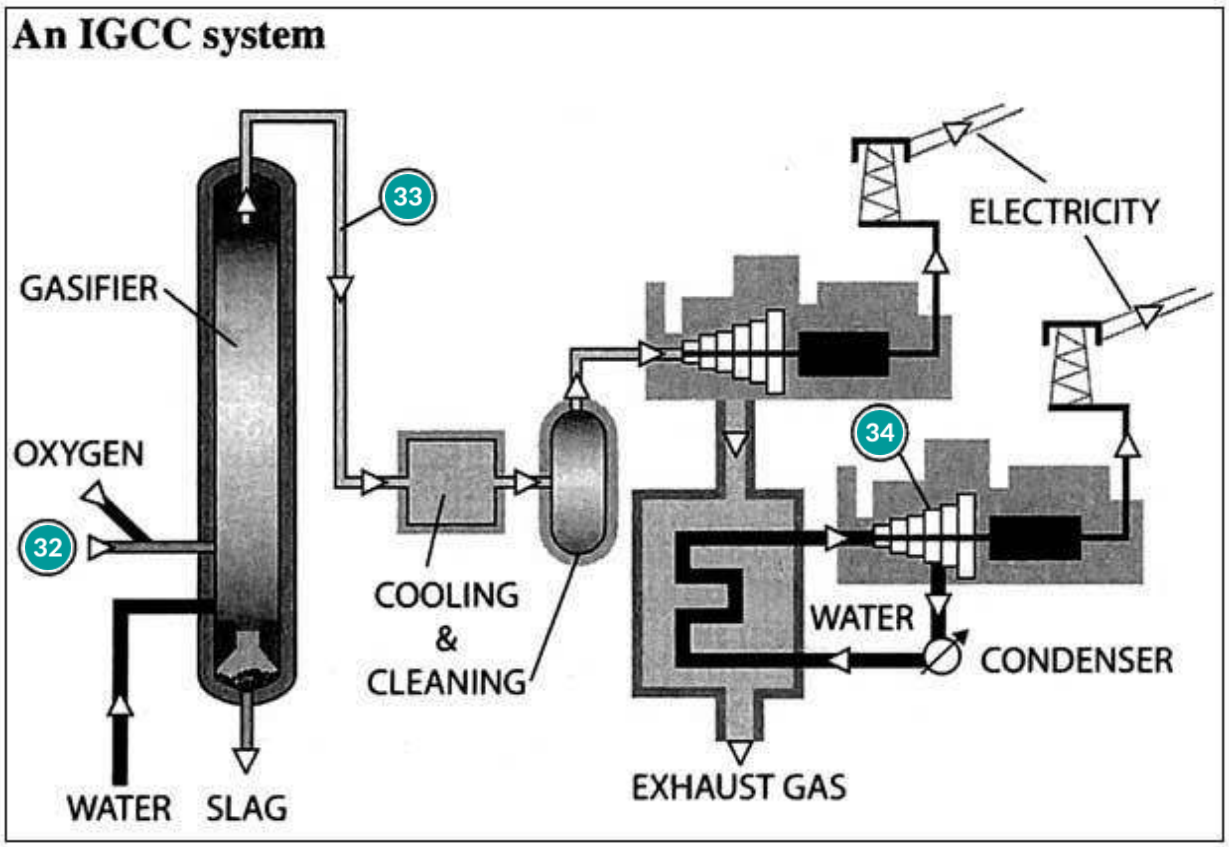
Instructions to follow

- Label the diagrams on the following page.
- Write the correct letter A-H, in boxes 29-34 on your answer sheet.

A CO2
B Coal
C Natural gas
D Oil
E Saline aquifer
F Steam-driven turbines
G Syngas
H Syngas-driven turbines

Carbon dioxide sequestration





Questions 35-40

Instructions to follow

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

Advantages of CCS

Sequestration is already used in the oil and gas sector.

CCS may cut 35 ..... in a short time.

36 ..... in labour, industry, and states already support CCS.

Alternatives, like 37 .....energy, take up vast amounts of space.

Disadvantages of CCS

The construction of new and the conversion of existing power plants and the liquefaction and transport of CO**2** are very costly. While sequestration is possible, the scale would be enormous. Therefore, CCS would need 38 .....

Some CCS technology is 39 ..... Gas-driven turbines for IGCC have not been used on an industrial scale.

Shallow underground storage may be limited; deep ocean storage is currently impossible. Geologists fear leaks in quake-prone regions.

Natural gas and solar PVs are cheaper. LCOE estimates for CCS = $0.09-15/kWh; for natural gas= 40 .....; and, for solar PV = $0.0849/kWh.

IELTS Reading Test 5

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

Three Ways to Levitate a Magic Carpet

It sounds like a science fiction joke, but it isn't. What do you get when you turn an invisibility cloak on its side? A mini flying carpet. So, say physicists who believe the same exotic materials used to make cloaking devices could also be used to levitate tiny objects. In a further breakthrough, two other research groups have come a step closer to cracking the mysteries of levitation.

Scientists have levitated objects before, most famously using powerful magnetic fields to levitate a frog. But that technique, using the repulsive force of a giant magnet, requires large amounts of energy. In contrast, the latest theories exploit the natural smaller amounts of energy produced by the quantum fluctuations of empty space.

In May 2006, two research teams led by Ulf Leonhardt at St Andrew's University, UK, and John Pendry at Imperial College, London, independently proposed that an invisibility cloak could be created from exotic materials with abnormal optical properties. Such a cloaking device – working in the microwave region – was manufactured later that year.

The device was formed from so-called 'meta material' is exotic materials made from complex arrays of metal units and wires. The metal units are smaller than the wavelength

of light and so the materials can be engineered to precisely control how electromagnetic light waves travel around them. They can transform space, tricking electromagnetic waves into moving along directions they otherwise wouldn't, 'says Leonhardt.

Leonhardt and his colleague Thomas Philbin, also at St Andrew's University, realised that this property could also be exploited to levitate extremely small objects. They propose inserting a metamaterial between two so-called Casimir plates. When two such plates are brought very close together, the vacuum between them becomes filled with quantum fluctuations of the electromagnetic field. As two plates are brought closer together, fewer fluctuations can occur within the gap between them, but on the outer sides of the plates, the fluctuations are unconstrained. This causes a pressure difference on either side of the plates, forcing the plates to stick together, in a phenomenon called the Casimir effect.

Leonhardt and Philbin believe that inserting a section of metamaterial between the plates will disrupt the quantum fluctuations of the electromagnetic field. In particular, metamaterials have a negative refractive index, so that electromagnetic light waves entering a metamaterial bend in the opposite way than expected, says Leonhardt. That will cause the Casimir force to act in the opposite direction – forcing the upper plate to levitate. The work will appear in the New Journal of Physics.

Federico Capasso, an expert on the Casimir effect at Harvard University in Boston, is impressed. 'Using metamaterials to reverse the Casimir effect is a very clever idea,' he says.

However, he points out that because metamaterials are difficult to engineer, it's unlikely that they could be used to levitate objects in the near future.

But there are good signs that quantum levitation could be achieved much sooner, by

other methods. Umar Mohideen at the University of California Riverside and his colleagues have successfully manipulated the strength of the Casimir force by increasing the reflectivity of one of the plates, so that it reflects virtual particles more efficiently. Modifying the strength of the Casimir force is the first step towards reversing it, says team member Galina Klimchitskaya at North-West Technical University in St Petersburg, Russia.

Capasso and his colleagues have also been working on an alternative scheme to harness a repulsive Casimir effect Their calculations show that a repulsive Casimir force could be set up between a 42.7 micrometer-wide gold-coated polystyrene sphere and a silicon dioxide plate, if the two are immersed in ethanol. 'Although the Casimir force between any two substances – the ethanol and gold, the gold and the silicon dioxide, or the silicon dioxide and the ethanol – is positive, the relative strengths of attraction are different, and when you combine the materials, you should see the gold sphere levitate,' he says.

Capasso's early experiments suggest that such repulsion could occur, and that in turn could be used to levitate one object above another. 'It's very early work, and we still need to make certain this is really happening, but we are slowly building up experimental evidence for quantum levitation, 'says Capasso, who presented his results at a conference on Coherence and Quantum Optics in Rochester, New York, in June.

This is a very exciting experimental result because it is the first demonstration that we can engineer a repulsive Casimir force,' says Leonhardt.

Questions 1-5

Instructions to follow

- Do the following statements agree with the claims of the writer 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 it is impossible to say what the writer thinks about this

1 A mini flying carpet is a possibility according to some scientists.

2 Cloaking devices can be used for levitation.

3 Scientists now know all about levitation.

4 Things can be transported from place to place using empty space technology.

5 The most recent research into levitation has made use of large magnets.

Questions 6-10

Instructions to follow

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

6 Ulf Leonhardt and John Pendry

A ○ worked together on a project in 2006.
B ○ both came up with the same idea.
C ○ invented the microwave oven.
D ○ used only basic objects in their research.

7 Metamaterials are

- A similar to light, but with a smaller wavelength.
- B a combination of simple metals and wires.
- C able to change where electromagnetic waves go.
- D engineered when light waves travel around them.

8 The importance of the Casimir effect is that it

- A doesn't require a vacuum in order to work.
- B increases the number of plates that can be used.
- C creates large and frequent fluctuations.
- D creates pressure difference and stickiness.

9 Leonhardt and Philbin think that putting a metamaterial between two plates will

- D cause the top plate to rise above the bottom plate.
- B stop electromagnetic light waves bending.
- C stop the Casimir force from working.
- D not affect electromagnetic fluctuations.

10 Why is it important to change the strength of the Casimir force?

- A to reflect the plates
- B to help reverse the force
- C to see virtual particles better
- D to enable other scientists to progress

Questions 11-13

Instructions to follow

- Complete each sentence with the correct ending A-F below.

11 Capasso is unconvinced that

A ○ B ○ C ○ D ○ E ○ F ○

12 Capasso has calculated that

A ○ B ○ C ○ D ○ E ○ F ○

13 Capasso has admitted that

A ○ B ○ C ○ D ○ E ○ F ○

A gold can be used to produce levitation.

B a particular type of ethanol has to be used.

C the levitation will last for only a few seconds.

D using metamaterials will help lead to levitation in the short term.

E his experiment will be extremely costly to perform.

F his idea is still only a theory.

Section 2

Instructions to follow

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

The Flavour Industry

A. Read through the nutritional information on the food in your freezer, refrigerator or kitchen pantry, and you are likely to find a simple, innocuous-looking ingredient recurring on a number of products: “natural flavour”. The story of what natural flavour is, how it got into your food, and where it came from is the result of more complex processes than you might imagine.

B. During the 1980s, health watchdogs and nutritionists began turning their attention to cholesterol, a waxy steroid metabolite that we mainly consume from animal-sourced products such as cheese, egg yolks, beef, poultry, shrimp, and pork. Nutritionists blamed cholesterol for contributing to the growing rates of obesity, heart disease, diabetes, and several cancers in Western societies. As extensive recognition of the matter grew amongst the common people, McDonalds stopped cooking their french fries in a mixture of cottonseed oil and beef tallow, and in 1990, the restaurant chain began using 100% vegetable oil instead.

C. This substantially lowered the amount of cholesterol in McDonalds’ fries, but it created a new dilemma The beef tallow and cottonseed oil mixture gave the French fries high cholesterol content, but it also gifted them with a rich aroma and “mouth-feel” that even James Beard, an American food critic, admitted he enjoyed. Pure vegetable oil is bland in

comparison. Looking at the current ingredients' list of McDonalds' French fries, however, it is easy to see how they overcame this predicament Aside from a few preservatives, there are essentially three main ingredients: potato, soybean oil, and the mysterious component of "natural flavour".

D. Natural flavour also entered our diet through the rise in processed foods, which now make up over 90% (and growing) of the American diet, as well as representing a burgeoning industry in developing countries such as China and India Processed foods are essentially any foods that have been boxed, bagged, canned or packaged, and have a list of ingredients on the label. Sometimes, the processing involves adding a little sodium or sugar, and a few preservatives. Often, however, it is coloured, bleached, stabilized, emulsified, dehydrated, odour-concealed, and sweetened. This process typically saps any original flavour out of the product, and so, of course, flavour must be added back in as well.

E. Often this is "natural flavour", but while the term may bring to mind images of fresh barley, hand-ground spices, and dried herbs being traded in a bustling street market, most of these natural sources are, in fact, engineered to culinary perfection in a set of factories and plants off the New Jersey Turnpike outside of New York. Here, firms such as International Flavors & Fragrances, Harmen & Keimer, Flavor Dynamics, Frutarom and Elan Chemical isolate and manufacture the tastes that are incorporated in much of what we eat and drink.

The sweet, summery burst of naturally squeezed orange juice, the wood-smoked aroma in barbeque sauces, and the creamy, buttery, fresh taste in many dairy products do not come from sundrenched meadows or backyard grills but are formed in the labs and test tubes of these flavour industry giants.

F. The scientists – dubbed "flavourists" who create the potent chemicals that set our olfactory senses to overdrive use a mix of techniques that have been refined over many years. Part of it is dense, intricate chemistry: spectrometers, gas chromatographs, and headspace-vapour analysers can break down components of a flavour in amounts as minute as one part per billion. Not to be outdone, however, the human nose can isolate aromas down to three parts per trillion. Flavourists, therefore, consider their work as much an art as a science, and flavourism requires a nose "trained" with a delicate and poetic sense of balance.

G. Should we be wary of the industrialisation of natural flavour? On its own, the trend may not present any clear reason for alarm. Nutritionists widely agree that the real assault on health in the last few decades stems from an "unholy trinity" of sugar, fat, and sodium in processed foods. Natural flavour on its own is not a health risk. It does play a role, however, in helping these processed foods to taste fresh and nutritious, even when they are not. So, while the natural flavour industry should not be considered the culprit, we might think of it as a willing accomplice.

Questions 14-21

Instructions to follow

- Reading Passage has seven paragraphs, A-G. Which paragraph contains the following information?
- Write the correct letter A-G, in boxes 14-21 on your answer sheet.
- NB You may use any letter more than once.

14 examples of companies that create natural flavours

A ○ B ○ C ○ D ○ E ○ F ○ G ○

15 an instance of a multinational franchise responding to public pressure

A ○ B ○ C ○ D ○ E ○ F ○ G ○

16 a statement on the health effects of natural flavours

A ○ B ○ C ○ D ○ E ○ F ○ G ○

17 an instance where a solution turns into a problem

A ○ B ○ C ○ D ○ E ○ F ○ G ○

18 a place in the home where one may encounter the term “natural flavour”

A ○ B ○ C ○ D ○ E ○ F ○ G ○

19 details about diet transformation that takes place in processed grocery items

A ○ B ○ C ○ D ○ E ○ F ○ G ○

20 a comparison of personal and technological abilities in flavour detection

A ○ B ○ C ○ D ○ E ○ F ○ G ○

21 examples of diet-related health conditions

A ○ B ○ C ○ D ○ E ○ F ○ G ○

Questions 22-25

Instructions to follow

- Do the following statements agree with the information given in Reading Passage 2? In boxes 22-25 on your answer sheet, write

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

22 On their own, vegetable oils do not have a strong flavour.

23 Soybean oil is lower in cholesterol than cottonseed oil.

24 Processed foods are becoming more popular in some Asian countries.

25 All food processing involves the use of natural flavours.

Question 26

Instructions to follow

- Choose the correct letter A, B, C or D. Write the correct letter in box 26 on your answer sheet.

26 The writer of Reading Passage 2 concludes that natural flavours .....

D ○ are the major cause of dietary health problems
B ○ are unhealthy, but not as bad as sugar, fat, and sodium
C ○ have health benefits that other ingredients tend to cancel out.
D ○ help make unhealthy foods taste better.

Section 3

Instructions to follow

- You should spend 20 minutes on Questions 27-40 which are based on Reading Passage 3

The Columbian Exchange

A. Millions of years ago, continental drift carried the Old World and New World apart, splitting North and South America from Eurasia and Africa. That separation lasted so long that it fostered divergent evolution; for instance, the development of rattlesnakes on one side of the Atlantic and of vipers on the other. After 1492, human voyagers in part reversed this tendency. Their artificial re-establishment of connections through the commingling of Old and New World plants, animals, and bacteria, commonly known as the Columbian Exchange, is one of the more spectacular and significant ecological events of the past millennium.

B. When Europeans first touched the shores of the Americas, Old World crops such as wheat, barley, rice, and turnips had not travelled west across the Atlantic, and New World crops such as maize, white potatoes, sweet potatoes, and manioc had not travelled east to Europe. In the Americas, there were no horses, cattle, sheep, or goats, all animals of Old World origin.

Except for the llama, alpaca, dog, a few fowl, and guinea pig, the New World had no equivalents to the domesticated animals associated with the Old World, nor did it have the pathogens associated with the Old World's dense populations of humans and such associated creatures as chickens, cattle, black rats, and Aedes aegypti

mosquitoes. Among these germs were those that carried smallpox, measles, chickenpox, influenza, malaria, and yellow fever.

C. As might be expected, the Europeans who settled on the east coast of the United States cultivated crops like wheat and apples, which they had brought with them. European weeds, which the colonists did not cultivate, and, in fact, preferred to uproot, also fared well in the New World. John Josselyn, an Englishman and amateur naturalist who visited New England twice in the seventeenth century, left us a list, "Of Such Plants as Have Sprung Up since the English Planted and Kept Cattle in New England," which included couch grass, dandelion, shepherd's purse, groundsel, sow thistle, and chickweed.

One of these, a plantain (Plantago major), was named "Englishman's Foot" by the Amerindians of New England and Virginia who believed that it would grow only where the English "have trodden, and was never known before the English came into this country". Thus, as they intentionally sowed Old World crop seeds, the European settlers were unintentionally contaminating American fields with weed seeds. More importantly, they were stripping and burning forests, exposing the native minor flora to direct sunlight, and the hooves and teeth of Old World livestock. The native flora could not tolerate the stress. The imported weeds could, because they had lived with large numbers of grazing animals for thousands of years.

D. Cattle and horses were brought ashore in the early 1600s and found hospitable climate and terrain in North America. Horses arrived in Virginia as early as 1620 and in Massachusetts in 1629. Many wandered free with little more evidence of their connection to humanity than collars with a hook at the bottom to catch on fences as they tried to leap over them to get at crops. Fences were not for keeping livestock in, but for keeping livestock out.

E. Native American resistance to the Europeans was ineffective. Indigenous peoples suffered from white brutality, alcoholism, the killing and driving off of game, and the expropriation of farmland, but all these together are insufficient to explain the degree of their defeat. The crucial factor was not people, plants, or animals, but germs. Smallpox was the worst and the most spectacular of the infectious diseases mowing down the Native Americans.

The first recorded pandemic of that disease in British North America detonated among the Algonquin of Massachusetts in the early 1630s. William Bradford of Plymouth Plantation wrote that the victims "fell down so generally of this disease as they were in the end not able to help one another, no, not to make a fire nor fetch a little water to drink, nor any to bury the dead". The missionaries and the traders who ventured into the American interior told the same appalling story about smallpox and the indigenes.

In 1738 alone, the epidemic destroyed half the Cherokee; in 1759 nearly half the Catawbas; in the first years of the next century, two thirds of the Omahas and perhaps half the entire population between the Missouri River and New Mexico; in 1837-38 nearly every last one of the Mandans and perhaps half the people of the high plains.

F. The export of America's native animals has not revolutionised Old World agriculture or ecosystems as the introduction of European animals to the New World did. America's grey squirrels and muskrats and a few others have established themselves east of the Atlantic and west of the Pacific, but that has not made much of a difference. Some of America's domesticated animals are raised in the Old World, but turkeys have not displaced chickens and geese, and guinea pigs have proved useful in laboratories, but have not usurped rabbits in the butcher shops.

G. The New World's great contribution to the Old is in crop plants. Maize, white potatoes, sweet potatoes, various squashes, chiles, and manioc have become essentials in the diets of hundreds of millions of Europeans, Africans, and Asians. Their influence on Old World peoples, like that of wheat and rice on New World peoples, goes far to explain the global population explosion of the past three centuries. The Columbian Exchange has been an indispensable factor in that demographic explosion.

H. All this had nothing to do with superiority or inferiority of biosystems in any absolute sense. It has to do with environmental contrasts. Amerindians were accustomed to living in one particular kind of environment, Europeans and Africans in another. When the Old World peoples came to America, they brought with them all their plants, animals, and germs, creating a kind of environment to which they were already adapted, and so they increased in number.

Amerindians had not adapted to European germs, and so initially their numbers plunged. That decline has reversed in our time as Amerindian populations have adapted to the Old World's environmental influence, but the demographic triumph of the invaders, which was the most spectacular feature of the Old World's invasion of the New, still stands.

Questions 27-34

Instructions to follow

- Reading Passage 3 has eight paragraphs A-H. Which paragraph contains the following information?
- Write the correct letter A-H in boxes 27-34 on your answer sheet.

27 A description of an imported species that is named after the English colonists

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

28 The reason why both the New World and Old World experienced population growth

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

29 The formation of new continents explained

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

30 The reason why the indigenous population declined

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

31 An overall description of the species lacked in the Old World and New World

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

32 A description of some animal species being ineffective in affecting the Old World

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

33 An overall explanation of the success of the Old World species invasion

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

34 An account of European animals taking roots in the New World

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○

Questions 35-38

Instructions to follow

- Do the following statements agree with the claims of the writer in Reading Passage? In boxes 35-38 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

35 European settlers built fences to keep their cattle and horses inside.

36 The indigenous people had been brutally killed by the European colonists.

37 America's domesticated animals, such as turkey, became popular in the Old World.

38 Crop exchange between the two worlds played a major role in world population.

Questions 39-40

Instructions to follow

- Write **NO MORE THAN THREE WORDS** form the passage for each answer.

39 Who reported the same story of European diseases among the indigenes from the American interior?

40 What is the still existing feature of the Old World's invasion of the New?

IELTS Reading Test 6

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

Health in the Wild

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

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

B. One example of self-medication was discovered in 1987. Michael Huffman and Mohamedi Seifu, working in the Mahale Mountains National Park in Tanzania, noticed that local chimpanzees suffering from intestinal worms would dose themselves with the pith of a plant called Veronia. This plant produces poisonous chemicals called terpenes. Its pith contains a strong enough concentration to kill gut parasites, but not so strong as to kill chimps (nor people, for that matter; locals use the pith for the same purpose). Given that the plant is known locally as "goat-killer", however, it seems that not all animals are as

smart as chimps and humans. Some consume it indiscriminately and succumb.

C. Since the Veronia-eating chimps were discovered, more evidence has emerged suggesting that animals often eat things for medical rather than nutritional reasons. Many species, for example, consume dirt a behaviour known as geophagy. Historically, the preferred explanation was that soil supplies minerals such as salt. But geophagy occurs in areas where the earth is not a useful source of minerals, and also in places where minerals can be more easily obtained from certain plants that are known to be rich in them. Clearly, the animals must be getting something else out of eating earth.

D. The current belief is that soil—and particularly the clay in it—helps to detoxify the defensive poisons that some plants produce in an attempt to prevent themselves from being eaten. Evidence for the detoxifying nature of clay came in 1999, from an experiment carried out on macaws by James Gilardi and his colleagues at the University of California, Davis.

Macaws eat seeds containing alkaloids, a group of chemicals that has some notoriously toxic members, such as strychnine. In the wild, the birds are frequently seen perched on eroding riverbanks eating clay. Dr Gilardi fed one group of macaws a mixture of harmless alkaloid and clay, and a second group just the alkaloid. Several hours later, the macaws that had eaten the clay had 60% less alkaloid in their bloodstreams than those that had not, suggesting that the hypothesis is correct.

E. Other observations also support the idea that clay is detoxifying. Towards the tropics, the amount of toxic compounds in plants increases-and so does the amount of earth eaten by herbivores. Elephants lick clay from mud holes all year round, except in September when they are bingeing on fruit which, because it has evolved to be eaten, is not toxic. And the addition of clay to the diets of domestic cattle increases the amount of nutrients

that they can absorb from their food by 10-20%.

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

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

H. It was Dr Huffman who got to the bottom of the problem. He did so by watching what came out of the chimps, rather than concentrating on what went in. He found that the egested leaves were full of intestinal worms. The factor common to all 19 species of leaves swallowed by the chimps was that they were covered with microscopic hooks. These caught the worms and dragged them from their lodgings.

I. Following that observation, Dr Engel is now particularly excited about how knowledge of the way that animals look after themselves could be used to improve the health of livestock. People might also be able to learn a thing or two, and may, indeed, already have

done so. Geophagy, for example, is a common behaviour in many parts of the world. The medical stalls in African markets frequently sell tablets made of different sorts of clays, appropriate to different medical conditions.

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

Questions 1-4

Instructions to follow

- Do the following statements agree with the information given in Reading Passage 1?
  TRUE if the statement is true
  FALSE if the statement is false
  NOT GIVEN if the information is not given in the passage

1. It is for 10 years that Dr Engel has been working on animal self-medication.
2. In order to find plants for medication, animals usually need to walk a long distance.
3. Birds such as Macaw, are seen eating clay because it is a part of their natural diet.
4. According to Dr Engel, it is exciting that research into animal self-medication can be helpful in the invention of new painkillers.

Questions 5-9

Instructions to follow

- Complete the notes below using NO MORE THAN ONE WORD from the passage.

Date	Name	Animal	Food	Mechanism
1987	Michael Huffman and Mohamedi Seifu	Chimpanzee	5 ..... of Veronia	Contained chemicals named 6 ..... which can kill parasites
1999	James Gilardi and his colleagues	Macaw	Seeds (contain 7 .....) and clay	Clay can 8 ..... the poisonous contents in food
1972	Richard Wrangham	Chimpanzee	Leaves with tiny 9 ..... on surface	Such leaves can catch and expel worms from intestines

Questions 10-13

Instructions to follow

- Write your answer, A-H, in boxes 10-13 on your answer sheet.
- Use the words mentioned in the box to answer the questions.

Though often doubted, the self-medicating behaviour of animals has been supported by an increasing amount of evidence. One piece of evidence particularly deals with 10 ..... , a soil-consuming behaviour commonly found across animals species, because the earth, often clay, can neutralize the A ..... content of their diet. Such behaviour can also be found among humans in Africa, where people purchase B ..... at market stalls as a kind of medication

to their illnesses. Another example of this is found in chimps eating leaves of often 13 ..... taste but with no apparent medicinal value until its unique structure came into light.

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

Section 2

Instructions to follow

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

The Nagymaros Dam

When Janos Vargha, a biologist from the Hungarian Academy of Sciences, began a new career as a writer with a small monthly nature magazine called Buvar, it was 9 years after the story behind the fall of the Berlin Wall had started to unfold. During his early research, he went to a beauty spot on the river Danube outside Budapest known as the Danube Bend to interview local officials about plans to build a small park on the site of an ancient Hungarian capital.

One official mentioned that passing this tree-lined curve in the river, a popular tourism spot for Hungarians was monotonous. Also, it was to be submerged by a giant hydroelectric dam in secret by a much-feared state agency known simply as the Water Management.

Vargha investigated and learned that the Nagymaros dam (pronounced “nosh-marosh”) would cause pollution, destroy underground water reserves, dry out wetlands and wreck the unique ecosystem of central Europe’s longest river. Unfortunately, nobody objected. “Of course, I wrote an article. But there was a director of the Water Management on the magazine’s editorial board. The last time, he went to the printers and stopped the presses, the article was never published. I was frustrated and angry, but I was ultimately interested in why they cared to ban my article,” he remembers today.

He found that the Nagymaros dam was part of a joint project with neighbouring Czechoslovakia to produce hydroelectricity, irrigate farms and enhance navigation. They would build two dams and re-engineer the Danube for 200 kilometres where it created the border between them. “The Russians were working together, too. They wanted to take their big ships from the Black Sea right up the Danube to the border with Austria.”

Vargha was soon under vigorous investigation, and some of his articles got past the censors. He gathered supporters for some years, but he was one of only a few people who believed the dam should be stopped. He was hardly surprised when the Water Management refused to debate the project in public. After a public meeting, the bureaucrats had pulled out at the last minute. Vargha knew he had to take the next step. “We decided it wasn’t enough to talk and write, so we set up an organization, the Danube Circle. We announced that we didn’t agree with censorship. We would act as if we were living in a democracy.” he says.

The Danube Circle was illegal and the secret publications it produced turned out to be samizdat leaflets. In an extraordinary act of defiance, it gathered 10,000 signatures for a petition objecting to the dam and made links with environmentalists in the west, inviting them to Budapest for a press conference.

The Hungarian government enforced a news blackout on the dam, but articles about the Danube Circle began to be published and appear in the western media. In 1985, the Circle and Vargha, a public spokesman, won the Right Livelihood award known as the alternative Nobel prize. Officials told Vargha he should not take the prize but he ignored them. The following year when Austrian environmentalists joined a protest in Budapest, they were met with tear gas and batons. Then the Politburo had Vargha taken from his new job as editor of the Hungarian version of *Scientific American.*

The dam became a focus for opposition to the hated regime. Communists tried to hold back the waters in the Danube and resist the will of the people. Vargha says, “Opposing the state directly was still hard.” “Objecting to the dam was less of a hazard, but it was still considered a resistance to the state.”

Under increasing pressure from the anti-dam movement, the Hungarian Communist Party was divided. Vargha says, “Reformists found that the dam was not very popular and economical. It would be cheaper to generate electricity by burning coal or nuclear power.” “But hardliners were standing for Stalinist ideas of large dams which mean symbols of progress.” Environmental issues seemed to be a weak point of east European communism in its final years. During the 1970s under the support of the Young Communist Leagues, a host of environmental groups had been founded. Party officials saw them as a harmless product of youthful idealism created by Boy Scouts and natural history societies.

Green idealism steadily became a focal point for political opposition. In Czechoslovakia, the human rights of Charter 77 took up environmentalism. The green-minded people of both Poland and Estonia participated in the Friends of the Earth International to protest against air pollution. Bulgarian environmentalists built a resistance group, called Ecoglasnost, which held huge rallies in 1989. Big water engineering projects were potent symbols of the old Stalinism.

Questions 14-21

Instructions to follow

- Complete the summary, using the list of words and phrases, A-L, below.

The story of the fall of the Berlin Wall had started to unfold 9 years earlier, when Janos Vargha visited the river Danube out of Budapest to discuss a matter of 14 ..... with executives. However, unfortunately, the tree-lined curve in the river was 15 ..... by a colossal dam which caused a lot of fear. He noticed the negative impact of the Nagymaros dam would be 16 ..... on the ecosystem around the main river. Besides, the dam was engineering public works, generating hydroelectricity, irrigating farmlands and developing sailing trade which was 17 ..... with a border of Czechoslovakia.

After one public meeting, Vargha 18 ..... the Danube Circle for showing the autonomy of the people in a democracy. Despite every effort, he who would eventually become the editor of the Hungarian edition was 19 ..... by the Politburo. Fortunately, with plenty of pressure from the anti-dam movement, east European communism's final symbol was opposed by the 20 ..... Overall, between political processing and environmentalists have been on a 21 ..... of views.

A severe

B discharged

C constructing a park of small-scale

D passed

E reformist

F swallowed up

G separated

H favourable

I established

J collision

K combined

L environmentalists

Questions 22-26

Instructions to follow

- Do the following statements reflect the claims of the writer in Reading Passage 2?
- In boxes 22-26 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

22 Janos Vargha predicted that the Nagymaros dam would wreck the natural atmosphere before it was built.

A The Nagymaros dam's project was managed by the Russians only.

24 The Danube Circle was an unauthorised group for opposing the dam.

D The Politburo accepted Vargha as editor of the Hungarian edition.

C The human rights Charter 77 in Czechoslovakia accepted green thoughts.

Section 3

Instructions to follow

- You should spend 20 minutes on Questions 29-40 which are based on Reading Passage 3

Movie of Metropolis

…being the science-fiction film that is steadily becoming a fact

A. When German director Fritz Lang visited the United States in 1924, his first glimpse of the country was a night-time view of the New York skyline from the deck of an ocean liner. This, he later recalled, was the direct inspiration for what is still probably the most innovative and influential science-fiction film ever made – Metropolis.

B. *Metropolis* is a bleak vision of the early twenty-first century that is at once both chilling and exhilarating. This spectacular city of the future is a technological marvel of high-rise buildings connected by elevated railways and airships. It's also a world of extreme inequality and social division. The workers live below ground and exist as machines working in an endless routine of mind-numbing 10-hour shifts while the city's elite lead lives of luxury high above. Presiding over them all is the Master of Metropolis, John Fredersen, whose sole satisfaction seems to lie in the exercise of power.

C. Lang's graphic depiction of the future is conceived in almost totally abstract terms. The function of the individual machines is never defined. Instead, this mass of dials, levers and gauges symbolically stands for all machines and all industry, with the workers as slave-live extensions of the equipment they have to operate. Lang emphasizes this idea in the famous shift-change sequence at the start of the movie when the workers walk in zombie-

like geometric ranks, all dressed in the same dark overalls and all exhibiting the same bowed head and dead-eyed stare. An extraordinary fantasy sequence sees one machine transformed into a huge open-jawed statue which then literally swallows them up.

D. On one level the machines and the exploited workers simply provide the wealth and services which allow the elite to live their lives of leisure, but on a more profound level, the purpose of all this demented industry is to serve itself. Power, control and the continuance of the system from one 10-hour shift to the next is all that counts. The city consumes people and their labour and in the process becomes a perverse parody of a living being.

E. It is enlightening, I think, to relate the film to the modern global economy in which multinational corporations now routinely close their factories in one continent so that they can take advantage of cheap labour in another. Like the industry in Metropolis, these corporations' goals of increased efficiency and profits have little to do with the welfare of the majority of their employees or that of the population at large. Instead, their aims are to sustain the momentum of their own growth and to increase the monetary rewards to a tiny elite – their executives and shareholders.

Fredersen himself is the essence of the big company boss: Rupert Murdoch would probably feel perfectly at home in his huge skyscraper office with its panoramic view of the city below. And it is important that there is never any mention of government in Metropolis – the whole concept is by implication obsolete. The only people who have power are the supreme industrialist, Fredersen, and his magician/scientist cohort Rotwang.

F. So far so good: when the images are allowed to speak for themselves the film is impeccable both in its symbolism and in its cynicism. The problem with Metropolis is its

sentimental story-line, which sees Freder, Fredersen's son, instantly falling in love with the visionary Maria. Maria leads an underground pseudo-religious movement and preaches that the workers should not rebel but should await the arrival of a 'Mediator' between the 'Head' (capital) and the 'Hands' (labour). That mediator is the 'Heart' – love, as embodied, finally, by Freder's love of Maria and his father's love of him.

G. Lang wrote the screenplay in collaboration with his then-wife Thea von Harbou. In 1933 he fled from the Nazis (and continued a very successful career in Hollywood). She stayed in Germany and continued to make films under the Hitler regime. There is a constant tension within the film between the too-tidy platitudes of von Harbou's script and the uncompromisingly caustic vigour of Lang's imagery.

H. To my mind, both in *Metropolis* and in the real world, it's not so much that the 'Head' and 'Hands' require a 'Heart' to mediate between them but that the 'Hands' need to develop their own 'Head', their own political consciousness, and act accordingly – through the ballot box, through buying power and through a sceptical resistance to the materialistic fantasies of the Fredersens.

I. All the same, *Metropolis* is probably more accurate now as a representation of industrial and social relations than it has been at any time since its original release. And Fredersen is certainly still the most potent movie symbol of the handful of elusive corporate figureheads who increasingly treat the world as a Metropolis-like global village.

Questions 27-30

Instructions to follow

- Do the following statements agree with the claims of the writer in Reading Passage 3?
  In boxes 27-30 on your answer sheet, write
  YES if the statement is true
  NO if the statement is false
  NOT GIVEN if the information is not given in the passage

B The inspiration of the movie-*Metropolis*-comes from the director's visit in the USA in 1924.

28 The Master of Metropolis, John Fredersen, is portrayed from an industrialist that the director met in the US.

29 The start of the movie exhibits the workers working in full energy.

30 The director and his wife got divorced because his wife decided to stay in Germany.

Questions 31-36

Instructions to follow

- Write NO MORE THAN TWO WORDS form the text for each answer.

The director depicts a world of inequality and 31 ..... In the future, the mindless masses of workers living underground are treated as 32 ..... And the master of them is 33 ....., who is in charge of the whole city. The writer claims that the director, Fritz Lang, presents the movie in an 34 ..... term, where the 35 ..... of the individual machines is not defined. Besides the writer compares the film to the modern global economy in which multinational corporations concern more about the growing 36 ..... and money.

Questions 37-40

Instructions to follow

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

37 The first sentence in **paragraph B** indicates

A the author's fear about technology
B the inspiration of the director
C the contradictory feelings towards future
D the city elite's well management of the workers

38 Why the function of the individual machines is not defined?

A Because Lang sticks to theme in a symbolic way.
B Because workers are more important to exploit.
C Because the fantasy sequence is difficult to take.
D Because the focus of the movie is not about machines.

39 The writer's purpose in paragraph five is to

A emphasize the multinational corporations' profit-oriented goal.
B compare the movie with the reality in the modern global economy
C exploit the difference between fantasy and reality
D enlighten the undeveloped industry

40 What is the writer's opinion about the movie?

A The movie's story-line is excellent.

B The movie has a poor implication in symbolism.

C The movie is perfect in all aspects.

D The movie is good but could be better.

IELTS Reading Test 7

Section 1

Instructions to follow

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

A. That 'Monday morning feeling' could be a crushing pain in the chest which leaves you sweating and gasping for breath. Recent research from Germany and Italy shows that heart attacks are more common on Monday morning and doctors blame the stress of returning to work after the weekend break.

B. The risk of having a heart attack on any given day should be one in seven, but a six-year study coordinated by researchers at the Free University of Berlin of more than 2,600 Germans revealed that the average person had a 20 per cent higher chance of having a heart attack on a Monday than on any other day.

C. Working Germans are particularly vulnerable, with a 33 per cent higher risk at the beginning of the working week. Non-workers, by comparison, appear to be no more at risk on a Monday than any other day.

D. A study of 11,000 Italians identified 8 am on a Monday morning as the most stressful time for the heart, and both studies showed that Sunday is the least stressful day, with fewer heart attacks in both countries.

E. The findings could lead to a better understanding of what triggers heart attacks, according to Dr. Stefan Willich of the Free University. 'We know a lot about long-term risk factors

such as smoking and cholesterol, but we don't know what actually triggers heart attacks, so we can't make specific recommendations about how to prevent them,' he said.

F. Monday mornings have a double helping of stress for the working body as it makes a rapid transition from sleep to activity, and from the relaxing weekend to the pressures of work. 'When people get up, their blood pressure and heart rate go up and there are hormonal changes in their bodies,' Willich explained. 'All these things can have an adverse effect in the blood system and increase the risk of a clot in the arteries which will cause a heart attack.'

'When people return to work after a weekend off, the pace of their life changes. They have a higher workload, more stress, more anger and more physical activity,' said Willich. 'We need to know how these events cause changes in the body before we can understand if they cause heart attacks.'

G. But although it is tempting to believe that returning to work increases the risk of a heart attack, both Willich and the Italian researchers admit that it is only a partial answer. Both studies showed that the over-65s are also vulnerable on a Monday morning even though most no longer work. The reason for this is not clear, but the Italian team at the Luigi Saddo Hospital in Milan speculate that social interactions—the thought of facing another week and all its pressures—may play a part.

H. What is clear, however, is that the Monday morning peak seems to be consistent from northern Germany to southern Italy in spite of the differences in diet and lifestyle.

I. Willich is reluctant at this stage to make specific recommendations, but he suggests that anyone who suffers from heart disease should take it easy on Monday mornings and leave potentially stressful meetings until midweek. 'People should try to create a pleasant

working environment,' he added. 'Maybe this risk applies only to those who see work as a burden, and people who enjoy their work are not so much at risk. We need to find out more.'

Questions 1 – 4

Instructions to follow

- Read the following statements 1-4. According to the reading passage, write
  TRUE if the statement is true
  FALSE if the statement is false
  NOT GIVEN if there is insufficient evidence

***Example**: It was once believed that there was an equal chance of suffering a heart attack on any day of the week.*

Answer: True.

1. Unemployed Germans have a higher risk of heart attack than employed Germans.
2. Unemployed Italians have a lower risk of heart attack than unemployed Germans.
3. German's risk heart attack because of their high consumption of fatty food.
4. Cholesterol and smoking cause heart attacks.

Questions 5-13

Instructions to follow

- Read passage 1 and choose the best heading for each paragraph A-I from the list of headings below.
- Write the appropriate number i-ix, in the spaces numbered 5-13 on the answer sheet. Use each heading ONCE only.

5 Heading for Paragraph A

6 Heading for Paragraph B

7 Heading for Paragraph C

8 Heading for Paragraph D

9 Heading for Paragraph E

10 Heading for Paragraph F

A Heading for Paragraph G

B Heading for Paragraph H

13 Heading for Paragraph I

List of headings

i. Exact cause of heart attacks

ii. The safest day

iii. Breathless, sweaty and crushed

iv. Reducing heart attack hazard

v. High-risk Monday

vi. Mondays: riskier than food and way of life

vii. Jobless but safer

viii. Elderly also at risk

ix. Bodily adaptations

Question 14

Instructions to follow

- Reading passage 1 is untitled. Select the best title for the entire passage from the choices A-D below.

A Reduce your chance of having a heart attack

B Warning: Mondays are bad for your heart

C The overweight and smokers risk heart attacks

D Happy and healthy

Section 2

Instructions to follow

- You should spend 20 minutes on Questions 15-27 which are based on Reading Passage 2

Growing up in New Zealand

It has long been known that the first one thousand days of life are the most critical in ensuring a person's healthy future; precisely what happens during this period to any individual has been less well documented. To allocate resources appropriately, public health and education policies need to be based upon quantifiable data, so the New Zealand Ministry of Social Development began a longitudinal study of these early days, with the view to extending it for two decades. Born between March 2009 and May 20I0, the 6,846 babies recruited came from a densely populated area of New Zealand, and it is hoped they will be followed until they reach the age of 21.

By 2014, fur reports, collectively known as *Growing Up in New Zealand* (*GUiNZ*), had been published, showing New Zealand to be a complex, changing country, with the participants and their families' being markedly different from those of previous generations.

Of the 6,846 babies, the majority were identified as European New Zealanders, but one quarter was Maori (indigenous New Zealanders), 20% were Pacific (originating in islands in the Pacific), and one in six were Asian. Almost 50% of the children had more than one ethnicity.

The first three reports of *GUiNZ* are descriptive, portraying the cohort before birth, at nine months and at two years of age. Already, the first report, *before we are born*, has

made history as it contains interviews with the children's mothers *and* fathers. The fourth report, which is more analytical, explores the definition of vulnerability for children in their first one thousand days.

Before we are born, published in 2010, describes the hopes, dreams, and realities that prospective parents have. It shows that the average age of both parents having a child was 30, and around two-thirds of parents were in legally binding relationships. However, one-third of the children were born to either a mother or a father who did not grow up in New Zealand – a significant difference from previous longitudinal studies in which a vast majority of parents were New Zealanders born and bred.

Around 60% of the births in the cohort were planned, and most families hoped to have two or three children. During pregnancy, some women changed their behaviour, with regard to smoking, alcohol, and exercise, but many did not. Such information will be useful for public health campaigns.

Now we are born is the second report. 52% of its babies were male and 48% female, with nearly a quarter delivered by caesarean section. The World Health Organisation and New Zealand guidelines recommend babies be breastfed exclusively for six months, but the median age for this in the *GUiNZ* cohort was four months since almost one-third of mothers had returned to full-time work. By nine months, the babies were all eating solid food. While 54% of them were living in accommodation their families owned, their parents had almost all experienced a drop in income, sometimes a steep one, mostly due to mothers' not working.

Over 90% of the babies were immunised, and almost all were in very good health. Of the mothers, however, 11% had experienced post-natal depression – an alarming statistic, perhaps, but, once again, useful for mental health campaigns. Many of the babies were

put in childcare while their mothers worked or studied, and the providers varied by ethnicity: children who were Maori or Pacific were more likely to be looked after by grandparents; European New Zealanders tended to be sent to daycare.

Now we are two, the third report, provides more insights into the children's development – physically, emotionally, behaviourally, and cognitively. Major changes in home environments are documented, like the socio-economic situation, and childcare arrangements. Information was collected both from direct observations of the children and from parental interviews. Once again, a high proportion of New Zealand two-year-old were in very good health.

Two-thirds of the children knew their gender, and used their own name or expressed independence in some way. The most common first word was a variation on 'Mum', and the most common favourite first food was a banana. Bilingual or multi-lingual children were in a large minority of 40%. Digital exposure was high: one in seven two-year-old had used a laptop or a children's computer, and 80% watched TV or DVDs daily; by contrast, 66% had books read to them each day.

The fourth report evaluates twelve environmental risk factors that increase the likelihood of poor developmental outcomes for children and draws on experiences in Western Europe, where the specific factors were collated. This, however, was the first time for their use in a New Zealand context. The factors include: being born to an adolescent mother; having one or both parents on income-tested benefits; and, living in cramped conditions.

In addition to descriptive ones, future reports will focus on children who move in and out of vulnerability to see how these transitions affect their later life.

To date, *GUiNZ* has been highly successful with only a very small dropout rate for participants – even those living abroad, predominantly in Australia, have continued to provide information. The portrait *GUiNZ* paints of a country and its people are indeed revealing.

Questions 15-20

Instructions to follow

- Do the following statements agree with the information given in passage 2?
  TRUE if the statement agrees with the information
  FALSE if the statement contradicts the information
  NOT GIVEN if there is no information on this

15 Findings from studies like *GUiNZ* will inform public policy.

16 Exactly 6,846 babies formed the *GUiNZ* cohort.

17 *GUiNZ* will probably end when the children reach ten.

18 Eventually, there will be 21 reports in *GUiNZ*.

19 So far, *GUiNZ* has shown New Zealanders today to be rather similar to those of 25 years ago.

20 Parents who took part in *GUiNZ* believe New Zealand is a good place to raise children.

Questions 21-27

Instructions to follow

- Write the correct letter A, B, C or D, in boxes 21-27 on your answer sheet.
- Classify the following things that relate to

A Report 1.

B Report 2.

C Report 3.

D Report 4.

21 This is unique because it contains interviews with both parents.

A ○ B ○ C ○ D ○

22 This looks at how children might be at risk.

A ○ B ○ C ○ D ○

A This suggests having a child may lead to financial hardship.

A ○ B ○ C ○ D ○

24 Information for this came from direct observations of children.

A ○ B ○ C ○ D ○

D This shows many children use electronic devices.

A ○ B ○ C ○ D ○

26 This was modelled on criteria used in Western Europe.

A ○ B ○ C ○ D ○

27 This suggests having a teenage mother could negatively affect a child.

A ○ B ○ C ○ D ○

Section 3

Instructions to follow

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

IS AID HURTING AFRICA?

Despite its population of more than one billion and its rich land and natural resources, the continent of Africa remains poor. The combined economies of its 54 states equal that of one European country: the Netherlands.

It is difficult to speak of Africa as a unit as its states differ from each other in culture, climate, size, and political system. Since mid-20th-century independence, many African states have pursued different economic policies. Yet, none of them has overcome poverty. Why might this be?

One theory says Africa is unlucky. Sparsely populated with diverse language and culture, it contains numerous landlocked countries, and it is far from international markets. Dambisa Moyo, a Zambian-born economist, has another theory. In her 2009 book, Dead Aid, she proposes that international aid is largely to blame for African poverty because it has encouraged dependence and corruption, and has diverted talented people from the business. One of her statistics is that from 1970-98, when aid to Africa was highest, poverty rose from eleven to 66%. If aid were cut, she believes Africans would utilise their resources more creatively.

When a state lacks the capacity to care for its people, international non-governmental organisations (NGOs), like Oxfam or the Red Cross, assume this role. While NGOs

distribute food or medical supplies, Moyo argues they reduce the ability of the state to provide. Furthermore, during this process, those in government and the military siphon off aid goods and money themselves. Transparency International, an organisation that surveys corruption, rates the majority of African states poorly.

Moyo provides another example. Maybe a Hollywood star donates American-made mosquito nets. Certainly, this benefits malaria-prone areas, but it also draws business away from local African traders who supply nets. More consultation is needed between do-gooder foreigners and local communities.

Moyo also suggests African nations increase their wealth by investment in bonds, or by increased co-operation with China.

The presidents of Rwanda and Senegal are strong supporters of Moyo, but critics say her theories are simplistic. The international aid community is not responsible for geography, nor has it anything to do with the military takeover, corruption, or legislation that hampers trade. Africans have had half a century of self-government and economic control, yet, as the population of the continent doubled, its GDP has risen only 60%. In the same period, Malaysia and Vietnam threw off colonialism and surged ahead economically by investing in education, health, and infrastructure; by lowering taxes on international trade; and, by being fortunate to be surrounded by other successful nations.

The economist Paul Collier has speculated that if aid were cut, African governments would not find alternative sources of income, nor would they reduce corruption. Another economist, Jeffrey Sachs, has calculated that twice the amount of aid currently given is needed to prevent suffering on a grand scale.

In *Dead Aid*, Moyo presents her case through a fictitious country called 'Dongo', but

nowhere does she provide examples of real aid organisations causing actual problems. Her approach may be entertaining, but it is hardly academic.

Other scholars point out that Africa is dominated by tribal societies with military-government elites. Joining the army, rather than doing business, was the easiest route to personal wealth and power. Unsurprisingly, military takeovers have occurred in almost every African country. In the 1960s and 70s, European colonials were replaced by African 'colonials' – African generals and their families. Meantime, the very small, educated bourgeoisie has moved abroad. All over Africa, strongmen leaders have ruled for a long time, or one unstable military regime has succeeded another. As a result, business, separate from the military government is rare, and international investment limited.

Post-secondary education rates are low in Africa. Communications and transportation remain basic although mobile phones are having an impact. The distances farmers must travel to market are vast due to poor roads. High cross-border taxes and long bureaucratic delays are par for the course. African rural populations exceed those elsewhere in the world. Without a decent infrastructure or an educated urbanised workforce, a business cannot prosper.

Recent World Bank statistics show that in southern Africa, the number of companies using the internet for business is 20% as opposed to 40% in South America or 80% in the US. There are 37 days each year without water whereas there is less than one day in Europe. The average cost of sending one container to the US is $7600, but only $3900 from East Asia or the Pacific. All these problems are the result of poor state planning.

Great ethnic and linguistic diversity within African countries has led to tribal favouritism. Governments are often controlled by one tribe or allied tribes; civil war is usually tribal. It is estimated each civil war costs a country roughly $64 billion. Southern Africa had 34 such

conflicts from 1940-2000 while South Asia, the next-affected region, had only 24 in the same period. To this day, a number of bloody conflicts continue.

Other opponents of Moyo add that her focus on market investment and more business with China is shortsighted. The 2008 financial crisis meant that countries with market investments lost money. Secondly, China's real intentions in Africa are unknown, but everyone can see China is buying up African farmland and securing cheap oil supplies.

All over Africa, there are untapped resources, but distance, diversity, and low population density contribute to poverty. Where there is no TV, infrequent electricity, and bad roads, there still seems to be money for automatic weapons just the right size for 12-year-old boys to use. Blaming the West for assisting with aid fails to address the issues of continuous conflict, ineffective government, and little infrastructure. Nor does it prevent terrible suffering.

Has aid caused problems for Africa, or is Africa's strife of its own making or due to geography? Whatever you think, Dambisa Moyo's book has generated lively discussion, which is fruitful for Africa.

Questions 28-38

Instructions to follow

- Choose ONE WORD OR A NUMBER from the passage for each answer.

AFRICA'S PROBLEMS

Africa has a lot of people, 28 ..... , and natural resources.

Yet it is still 29 ..... .

Moyo's theory	Other scholars' theories
International 30 ..... is largely responsible. States now depend on it, and are corrupt as a result. Talented people have been drawn away from 31 ..... by working for NGOs. If foreigners help, they ought to involve local 32 ..... more. African states should buy into bond markets, and have a closer relationship with 33	This is because Africa is unfortunate due to its 34 ..... . It is a long way from international markets. It is also culturally and politically diverse. However, corrupt military-government elites control most of the economy. Many African business-people have left. There is little international 35 ..... . 36 ..... , communications, and transportation remain under-developed. Numerous civil wars, mostly tribal, have been costly. From 1940-2000, there were 37 ..... of these.

Without international aid:

Moyo's theory	Other scholars' theories
Africa would use its resources more creatively.	Africans would experience enormous 38 ..... .

Questions 39-40

Instructions to follow

- Choose TWO letters: A-E.
- Which of the statements does the writer of passage 3 support?

A Moyo is right that international aid is causing Africa's problems.

B Moyo has ignored the role of geography in Africa.

C Convincing evidence is lacking in Moyo's theory.

D Most political leaders in Africa agree with Moyo's analysis.

E Useful discussion about Africa has resulted from Moyo's book.

IELTS Reading Test 8

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

Bovids

A. The family of mammals called bovids belongs to the Artiodactyl class, which also includes giraffes. Bovids are a highly diverse group consisting of 137 species, some of which are man's most important domestic animals.

B. Bovids are well represented in most parts of Eurasia and Southeast Asian islands, but they are by far the most numerous and diverse in the latter Some species of bovid are solitary, but others live in large groups with complex social structures. Although bovids have adapted to a wide range of habitats, from arctic tundra to deep tropical forest, the majority of species favour open grassland, scrub or desert. This diversity of habitat is also matched by great diversity in size and form: at one extreme is the royal antelope of West Africa, which stands a mere 25 cm at the shoulder; at the other, the massively built bison of North America and Europe, growing to a shoulder height of 2.2m.

C. Despite differences in size and appearance, bovids are united by the possession of certain common features. All species are ruminants, which means that they retain undigested food in their stomachs, and regurgitate it as necessary. Bovids are almost exclusively herbivorous: plant-eating "incisors: front teeth herbivorous".

D. Typically, their teeth are highly modified for browsing and grazing: grass or foliage is cropped with the upper lip and lower incisors** (the upper incisors are usually absent), and then ground down by the cheek teeth. As well as having cloven, or split, hooves, the males of ail bovid species and the females of most carry horns. Bovid horns have bony cores covered in a sheath of horny material that is constantly renewed from within; they are unbranched and never shed. They vary in shape and size: the relatively simple horns of a large Indian buffalo may measure around 4 m from tip to tip along the outer curve, while the various gazelles have horns with a variety of elegant curves.

E. Five groups, or sub-families, may be distinguished: Bovinae, Antelope, Caprinae, Cephalophinae and Antilocapridae. The sub-family Bovinae comprises most of the larger bovids, including the African bongo, and nilgae, eland, bison and cattle. Unlike most other bovids they are all non-territorial. The ancestors of the various species of domestic cattle banteng, gaur, yak and water buffalo are generally rare and endangered in the wild, while the auroch (the ancestor of the domestic cattle of Europe) is extinct.

F. The term ‘antelope is not a very precise zoological name – it is used to loosely describe a number of bovids that have followed different lines of development. Antelopes are typically long-legged, fast-running species, often with long horns that may be laid along the back when the animal is in full flight. There are two main sub-groups of antelope: Hippotraginae, which includes the oryx and the addax, and Antilopinae, which generally contains slighter and more graceful animals such as gazelle and the springbok. Antelopes are mainly grassland species, but many have adapted to flooded grasslands: pukus, waterbucks and lechwes are all good at swimming, usually feeding in deep water, while the sitatunga has long, splayed hooves that enable it to walk freely on swampy ground.

G. The sub-family Caprinae includes the sheep and the goat, together with various relatives such as the goral and the tahr. Most are woolly or have long hair. Several species, such as wild goats, chamois and ibex, are agile cliff – and mountain-dwellers. Tolerance of extreme conditions is most marked in this group: Barbary and bighorn sheep have adapted to arid deserts, while Rocky Mountain sheep survive high up in mountains and musk oxen in artic tundra.

H. The duiker of Africa belongs to the Cephalophinae sub-family. It is generally small and solitary, often living in thick forest. Although mainly feeding on grass and leaves, some duikers – unlike most other bovids – are believed to eat insects and feed on dead animal carcasses, and even to kill small animals.

I. The pronghorn is the sole survivor of a New World sub-family of herbivorous ruminants, the Antilocapridae in North America. It is similar in appearance and habits to the Old-World antelope. Although greatly reduced in numbers since the arrival of Europeans, and the subsequent enclosure of grasslands, the pronghorn is still found in considerable numbers throughout North America, from Washington State to Mexico. When alarmed by the approach of wolves or other predators, hairs on the pronghorn's rump stand erect, so showing and emphasizing the white patch there. At this signal, the whole herd gallops off at speed of over 60 km per hour.

Questions 1-3

Instructions to follow

- Choose the correct letter A, B, C or D.
- Write your answers in boxes 1-3 on your answer sheet.

1 In which region is the biggest range of bovids to be found?

A Africa
B Eurasia
C North America
D South-east Asia

2 Most bovids have a preference for living in

A isolation
B small groups
C tropical forest
D wide open spaces

3 Which of the following features do all bovids have in common?

A Their horns are shot
B They have upper incisors
C They store food in the body
D Their hooves are undivided

Questions 4-8

Instructions to follow

- Look at the following characteristics and list of sub-families below.
- Match each characteristic with the correct sub-family A, B, C or D.
- Write the correct letter, A, B, C or D in boxes 4-8 on your answer sheet.
- NB You may use any letter more than once

4 can endure very harsh environments

A ○ B ○ C ○ D ○

5 includes the ox and the cow

A ○ B ○ C ○ D ○

6 may supplement its diet with meat

A ○ B ○ C ○ D ○

7 move at a high speed

A ○ B ○ C ○ D ○

8 does not defend a particular area of land

A ○ B ○ C ○ D ○

List of sub-families

A Antelope

B Bovinae

C Caprinae

D Cephalophinae

Questions 9-13

Instructions to follow

- Answer the questions below.
- Choose NO MORE THAN THREE WORDS from the passage for each answer.
- Write your answer in boxes 9-13 on your answer sheet.

9 What is the smallest species of Bovid called?

10 Which species of Bovinae has now died out?

11 What facilitates the movement of the sitatunga over wetland?

B What sort of terrain do barbary sheep live in?

C What is the only living member of the Antilocapridae sub-family?

Section 2

Instructions to follow

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

Western Immigration of Canada

A. By the mid-1870s Canada wanted an immigrant population of agricultural settlers established in the West. No urban centres existed on the prairies in the 1870s, and rural settlement was the focus of the federal government's attention. The western rural settlement was desired, as it would provide homesteads for the sons and daughters of eastern farmers, as eastern agricultural landfilled to capacity. As well, eastern farmers and politicians viewed western Canada, with its broad expanses of unpopulated land, as a prime location for expanding Canada's agricultural output, especially in terms of wheat production to serve the markets of eastern Canada.

B. To bolster Canada's population and agricultural output, the federal government took steps to secure western land. The Dominion of Canada purchased Rupert's Land from the Hudson's Bay Company in 1870. In 1872, the federal government enacted the Dominion Lands Act. This act enabled settlers to acquire 160 acres of free land, as long as settlers remained on their land for a period of three years, made certain minor improvements to the land, and paid a $10.00 registration fee.

The Canadian government also created a Mounted Police Force in 1873. The Mounties ***journeyed west*** to secure the area for future settlers. By 1876 the NWMP had established themselves in the West. The major posts included Swan River, Fort Saskatchewan, Fort Calgary, Fort Walsh and Fort Macleod. All of these initiatives attracted

a number of eastern-Canadian settlers, as well as European and American immigrants, to Canada's West, and particularly to the area of Manitoba.

C. The surest way to protect Canadian territory, and to achieve the secondary goal for joining British Columbia to the rest of the country, was to import large numbers of Eastern Canadian and British settlers. Settling the West also made imperative the building of a transcontinental railway. The railway would work to create an east-west economy, in which western Canada would feed the growing urban industrial population of the east, and in return become a market for eastern Canadian manufactured goods.

D. Winnipeg became the metropolis of the West during this period. Winnipeg's growth before 1900 was the result of a combination of land speculation, growth of housing starts, and the federal government's solution in 1881 of Winnipeg as a major stop along the CPR. This decision culminated in a land boom between 1881 and 1883 which resulted in the transformation of hamlets like Portage la Prairie and Brandon into towns, and a large increase in Manitoba's population. Soon, Winnipeg stood at the junction of three transcontinental railway lines which employed thousands in rail yards. Winnipeg also became the major processor of agricultural products for the surrounding hinterland.

E. The majority of settlers to Winnipeg, and the surrounding countryside, during this early period, were primarily Protestant English-speaking settlers from Ontario and the British Isles. These settlers established Winnipeg upon a British-Ontarian ethos which came to dominate the society's social, political, and economic spirit. This British-Ontarian ethnic homogeneity, however, did not last very long. Increasing numbers of foreign immigrants, especially from Austria-Hungary and Ukraine soon added a new ethnic element to the recent British, the older First Nation Métis, and Selkirk's settler population base.

Settling the West with (in particular) Eastern Canadians and British immigrant offered the

advantage of safeguarding the 49th parallel from the threat of American take-over, had not the Minnesota legislature passed a resolution which provided for the annexation of the Red River district. The Red River in 1870 was the most important settlement on the Canadian prairies. It contained 11,963 inhabitants of whom 9,700 were Métis and First Nations. But neighbouring Minnesota already had a population of over 100,000.

F. Not all of the settlers who came to western Canada in the 1880s, however, desired to remain there. In the 1870s and 1880s, economic depression kept the value of Canada's staple exports low, which discouraged many from permanent settlement in the West. Countries including Brazil, Argentina, Australia, New Zealand and the United States competed with Canada for immigrants. Many immigrants and thousands of Canadians chose to settle in the accessible and attractive American frontier. Canada before 1891 has been called "a huge demographic railway station" where thousands of men, women, and children were constantly going and coming, and where the number of departures invariably exceeded that of arrivals."

G. By 1891 Eastern Canada had its share of both large urban centres and problems associated with city life. While the booming economic centres of Toronto and Montreal were complete with electricity and telephones in the cities' wealthiest areas by the turn of the century, slum conditions characterised the poorest areas like the district known as 'the Ward' in Toronto. Chickens and pigs ran through the streets; privy buckets spilled onto backyards and lanes creating cesspools in urban slums. These same social reformers believed that rural living, in stark contrast to urban, would lead to a healthy, moral, and charitable way of life.

Social reformers praised the ability of fresh air, hard work, and open spaces for 'Canadianizing' immigrants. Agricultural pursuits were seen as especially fitting for attaining this 'moral' and family-oriented way of life, in opposition to the single male-

dominated atmosphere of the cities. Certainly, agriculture played an important part in the Canadian economy in 1891. One-third of the workforce worked on farms.

H. The Canadian government presented Canada's attractions to potential overseas migrants in several ways. The government offered free or cheap land to potential agriculturists. As well, the government established agents and/or agencies for the purpose of attracting emigrants overseas. Assisted passage schemes, bonuses and commissions to agents and settlers and pamphlets also attracted some immigrants to Canada. The most influential form of attracting others to Canada, however, remained the letters home written by emigrants already in Canada.

Letters from trusted friends and family members. Letters home often contained exaggerations of the 'wonder of the new world.' Migrant workers and settlers already in Canada did not want to disappoint, or worry, their family and friends at home. Embellished tales of good fortune and happiness often succeeded in encouraging others to come.

Questions 14-20

Instructions to follow

- The Reading Passage has eight paragraphs A-H.
- Choose the correct heading for paragraphs A-H from the list below.

List of Headings

i. Not all would stay in Canada forever

ii. Government's safeguard in the West

iii. Eastern Canada is full

iv. Built-up to the new infrastructure

v. An exclusive British domination in Ontario established ever since

vi. Ethnics and language make-up

vii. Pursuing a pure life

viii. Police recruited from mid-class families

ix. Demand of western immigration

x. Early major urban development of the West

xi. Attracting urban environment

xii. Advertising of Western Canada

14 Paragraph **B**

15 Paragraph **C**

16 Paragraph **D**

17 Paragraph **E**

18 Paragraph **F**

19 Paragraph **G**

20 Paragraph **H**

Questions 21-26

Instructions to follow

- Write NO MORE THAN TWO WORDS from the Reading Passage for each answer.

With the saturation of Eastern Canada, the Western rural area would supply 21 ..... for the descendants of easterners. Politicians also declared that Western got potential to increase 22 ..... of Canada according to A ..... crop that consumed in the East. The federal government started to prepare and made it happen. First, the government bought land from a private 24 ..... , and legally offered a certain area to people who stayed for a qualifying period of time. Then, mounted D ..... was found to secure the land. However, the best way to protect citizens was to build a 26 ..... to transport the migrants and goods between the West and the East.

Section 3

Instructions to follow

- You should spend 20 minutes on Questions 27-40 which are based on Reading Passage 3

The significant role of mother tongue language in education

A. One consequence of population mobility is an increasing diversity within schools. To illustrate, in the city of Toronto in Canada, 58% of kindergarten pupils come from homes where English is not language of communication. Schools in Europe and North America have experienced this diversity for years, but educational policies and practices vary widely between countries and even within countries. Some political parties and groups search for ways to solve the problem of diverse communities and their integration in schools and society. They see few positive consequences for the host society and worry that diversity threaten the identity of the host society. Consequently, they promote unfortunate educational policies that will make the "problem" disappear. If students retain their culture and language, they are viewed as less capable of identifying with the mainstream culture and learning the mainstream language of the society.

B. The challenge for educators and policy-makers is to shape the evolution of national identity in such a way that the rights of all citizens (including school children) are respected, and the cultural, linguistic, and economic resources of the nation are maximized. To waste the resources of the nation by discouraging children from developing their mother tongues is quite simply unintelligent from the point of view of national self-interest. A first step in Providing an appropriate education for culturally and linguistically diverse children is to examine what the existing research says about the role

of children's mother tongues in their educational development.

C. In fact, the research is very clear. When children continue to develop their abilities in two or more languages throughout their primary school, they gain a deeper understanding of language and how to use it effectively. They have more practice in processing language, especially when they develop literacy in both. More than 150 research studies conducted during the past 35 years strongly support what Goethe, the famous eighteenth-century German philosopher, once said: that the person who knows only one language does not truly know that language. Research suggests that bilingual children may also develop more flexibility in their thinking as a result of processing information through two different languages.

D. The level of development of children's mother tongue is a strong predictor of their second language development. Children who come to school with a solid foundation in their mother tongue develop stronger literacy abilities in the school language. When parents and other caregivers (e.g. grandparents) are able to spend time with their children and tell stories or discuss issues with them in a way that develops their mother tongue, children come to school well- prepared to learn the school language and succeed educationally. Children's knowledge and skills transfer across languages from the mother tongue to the school language. Transfer across languages can be two-way: both languages nurture each other when the educational environment permits children access to both languages.

E. Some educators and parents are suspicious of mother tongue-based teaching programs because they worry that they take time away from the majority language. For example, in a bilingual program where 50% of the time is spent teaching through children's home language and 50% through the majority language, surely children's won't progress as far in the letter? One of the most strongly established findings of educational research,

however, is that well implemented bilingual programs can promote literacy and subject-matter knowledge in a minority language without any negative effects on children's development in the majority language. Within Europe, the Foyer program in Belgium, which develops children's speaking and literacy abilities in three languages (their mother tongue, Dutch and French), most clearly illustrates the benefits of bilingual and trilingual education (see Cummins, 2000).

F. It is easy to understand how this happens. When children are learning through a minority language, they are learning concepts and intellectual skills too. Pupils who know how to tell the time in their mother tongue understand the concept of telling time. In order to tell time in the majority language they do not need to re-learn the concept. Similarly, at more advanced stages, there is transfer across languages in other skills such as knowing how to distinguish the main idea from the supporting details of a written passage or story, and distinguishing fact from opinion, Studies of secondary school pupils are providing interesting findings in this area, and it would be worth extending this research.

G. Many people marvel at how quickly bilingual children seem to "pick up" conversational skills in the majority language at school (although it takes much longer for them to catch up to native speakers in academic language skills). However, educators are often much less aware of how quickly children can lose their ability to use their mother tongue, even in the home context. The extent and rapidity of language loss will vary according to the concentration of families from a particular linguistic group in the neighborhood. Where the mother tongue is used extensively in the community, then language loss among young children will be less. However, where language communities are not concentrated in particular neighborhoods, children can lose their ability to communicate in their mother tongue within 2-3 years of starting school. They may retain receptive skills in the language but they will use the majority language in speaking with their peers and siblings and in

responding to their parents. By the time children become adolescents, the linguistic division between parents and children has become an emotional chasm. Pupils frequently become alienated from the cultures of both home and school with predictable results.

Questions 27-30

Instructions to follow

- Choose the correct letter A, B, C or D.
- Write the correct letter in boxes 27-30 on your answer sheet.

27 What point is the writer making in the second paragraph?

A Some present studies on children's mother tongues are misleading
B A culturally rich education programme benefits some children more than others.
C bilingual children can make a valuable contribution to the wealth of a country
D The law on mother tongue use at school should be strengthened.

28 Why does the writer refer to something that Goethe said?

A to lend weight to his argument
B to contradict some research
C to introduce a new concept
D to update current thinking

29 The writer believes that when young children have a firm grasp of their mother tongue

A ○ they can teach older family members what they learn at school
B ○ they go on to do much better throughout their time at school
C ○ they can read stories about their cultural background
D ○ they develop stronger relationships with their family than with their peers.

30 Why are some people suspicious about mother tongue-based teaching programmes?

A ○ They worry that children will be slow to learn to read in either language
B ○ They think that children will confuse words in the two languages.
C ○ They believe that the programmes will make children less interested in their lessons
D ○ They fear that the programmes will use up valuable time in the school day.

Questions 31-35

Instructions to follow

- Complete the following summary of the paragraphs of Reading Passage.
- Write your answers in boxes 31-35 on your answer sheet.
- Use the words mentioned in the box to complete the summary.

Bilingual children

It was often recorded that Bilingual Children acquire the 31 ..... to converse in the majority language remarkably quickly. The fact that the mother tongue can disappear at a similar 32 ..... is less well understood. This phenomenon depends to a certain extent, on the proposition of people with the same linguistic background that have settled in a particular 33 .....; If this is limited, children are likely to lose the active use of their mother tongue. And thus no longer employ it even with 34 ..... although they may still understand it. It follows that teenager children

in these circumstances experience a sense of 35..... in relation to all aspects of their lives.

A Teachers	B school	C dislocation	D Rate	E time
F family	G communication	H type	I ability	J Area

Questions 36-40

Instructions to follow

- Do the following statements agrees with the views of the writer in Reading passage 3?
  YES if the statement agrees with the views of the writer
  NO if the statement contradicts with the views of the writer
  NOT GIVEN if it is impossible to say what the writer thinks about this

36 Less than half the children who attend kindergarten in Toronto have English as their mother tongue.

37 Research proves that learning the host country language at school can have an adverse effect on a child's mother tongue.

38 the foyer Program is to be accepted by the French education system.

39 Bilingual children are taught to tell the time earlier than monolingual children.

40 Bilingual children can eventually apply reading comprehension strategies acquired in one language when reading in the other.

IELTS Reading Test 9

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

Building Material

Bricks are one of the oldest known building materials dating back to 7000 BCE. The oldest found were sun-dried mud bricks in southern Turkey and these would have been standard in those days. Although sun-dried mud bricks worked reasonably well, especially in moderate climates, fired bricks were found to be more resistant to harsh weather conditions and so fired bricks are much more reliable for use in permanent buildings. Fired bricks are also useful in hotter climates, as they can absorb any heat generated throughout the day and then release it at night.

The Romans also distinguished between the bricks they used that were dried by the sun and air and the bricks that were fired in a kiln. The Romans were real brick connoisseurs. They preferred to make their bricks in the spring and hold on to their bricks for two years, before they were used or sold. They only used clay that was whitish or red for their bricks. The Romans passed on their skills around their sphere of influence and were especially successful at using their mobile kilns to introduce kiln-fired bricks to the whole of the Roman Empire.

During the twelfth century, bricks were introduced to northern Germany from northern

Italy. This created the 'brick Gothic period,' which was a reduced style of Gothic architecture previously very common in northern Europe. The buildings around this time were mainly built from fired red clay bricks. The brick Gothic period can be categorised by the lack of figural architectural sculptures that had previously been carved in stone, as the Gothic figures were impossible to create out of bulky bricks at that time.

Bricks suffered a setback during the Renaissance and Baroque periods, with exposed brick walls becoming unpopular and brickwork being generally covered by plaster. Only during the mid-eighteenth century did visible brick walls again regain some popularity.

Bricks today are more commonly used in the construction of buildings than any other material, except wood. Brick architecture is dominant within its field and a great industry has developed and invested in the manufacture of many different types of bricks of all shapes and colours. With modern machinery, earth moving equipment, powerful electric motors and modern tunnel kilns, making bricks has become much more productive and efficient. Bricks can be made from a variety of materials, the most common being clay, but they can also be made of calcium silicate and concrete.

Good quality bricks have major advantages over stone as they are reliable, weather resistant and can tolerate acids, pollution and fire. They are also much cheaper than cut stonework. Bricks can be made to any specification in colour, size and shape, which makes them easier to build with than stone. On the other hand, there are some bricks that are more porous and therefore more susceptible to damage from dampness when exposed to water. For best results in any construction work, the correct brick must be chosen in accordance with the job specifications.

Today, bricks are mainly manufactured in factories, usually employing one of three

principal methods – the soft mud process, the stiff mud process and the dry clay process. In the past, bricks were largely manufactured by hand, and there are still artisanal companies that specialise in this product. The process involves putting the clay, water and additives into a large pit, where it is all mixed together by a tempering wheel, often still moved by horse power. Once the mixture is of the correct consistency, the clay is removed and pressed into moulds by hand. To prevent the brick from sticking to the mould, the brick is coated in either sand or water, though coating a brick with sand gives an overall better finish to it. Once shaped, the bricks are laid outside to dry by air and sun for three to four days. If these bricks left outside for the drying process are exposed to a shower, the water can leave indentations on the brick, which, although not affecting the strength of the brick, is considered very undesirable. After drying, the bricks are then transferred to the kiln for firing and this creates the finished product. Bricks are now more generally made by manufacturing processes using machinery. This is a large-scale effort and produces bricks that have been fired in patent kilns.

Today's bricks are also specially designed to be efficient at insulation. If their composition is correct and their laying accurate, a good brick wall around a house can save the occupants a significant amount of money. This is primarily achieved today through cavity wall insulation. Insulating bricks are built in two separate leaves, as they are called in the trade. The gap between the inner and outer leaves of brickwork depends on the type of insulation used, but there should be enough space for a gap of twenty millimeters between the insulating material in the cavity and the two leaves on either side. The air in these gaps is an efficient insulator by itself. Cavity walls have also replaced solid walls, because they are more resistant to rain penetration. Because two leaves are necessary, a strong brick manufacturing industry is essential, so that enough good quality insulating bricks are plentifully available.

Questions 1-5

Instructions to follow

- Do the following statements agree with the information given in the text?
- In boxes 1-5 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 Fired brick are not efficient in countries with hot weather, as they absorb too much heat.

2 Roman brick production was determined by which season it was.

3 The bricks that led to the brick Gothic period in northern Germany were popular with house builders.

4 Buildings showing brickwork were generally not liked during the Renaissance.

5 Some types of bricks can soak up too much water due to their absorbent qualities.

Questions 6-11

Instructions to follow

- Complete the flow chart below.
- Write NO MORE THAN TWO WORDS from the text for each answer.
- Write your answers in boxes 6-11 on your answer sheet.

Making Hand-made Bricks

Combine the 6 ....., water and other ingredients with a 7 ..... to the desired consistency.

↓

Using the hand, fill 8 ..... with the mixture-coat with 9 ..... (provides a better finish) or water to prevent stickiness.

↓

Dry in the sun; try to avoid rain, which will cause marks in the bricks – this will not affect the bricks' 10 .....

↓

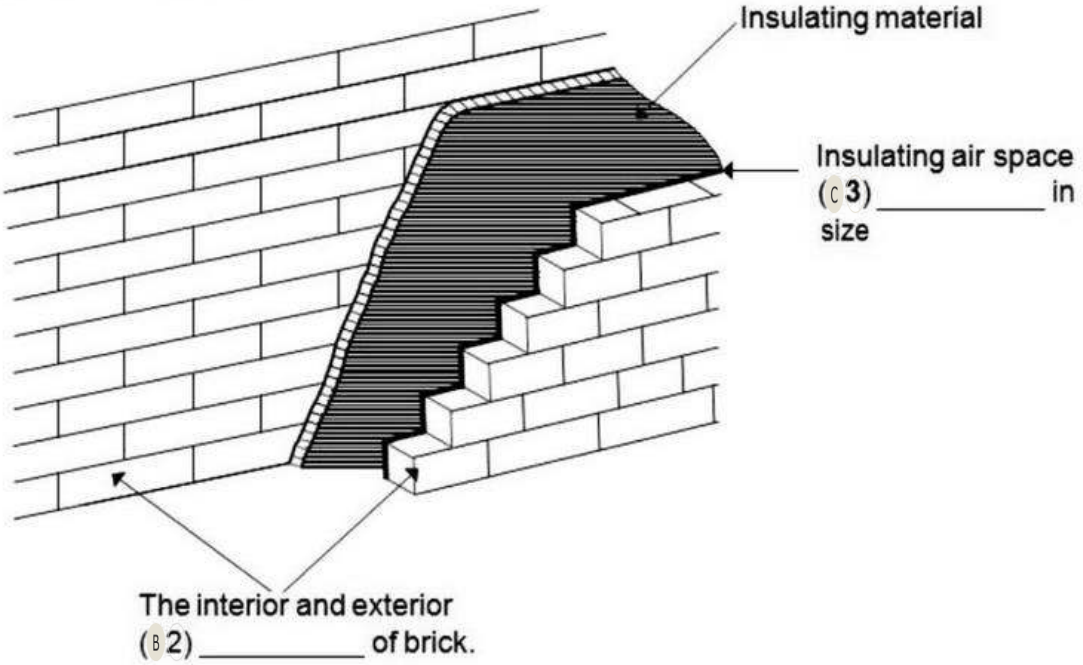
Bricks are then transferred to the A ..... for firing

Questions 12 and 13

Instructions to follow

- Label the diagram below.
- Write NO MORE THAN TWO WORDS AND/OR A NUMBER from the text for each answer.
- Write your answers in boxes 12 and 13 on your answer sheet.

Cavity Wall Insulation



Section 2

Instructions to follow

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

Arctic Survivors

The Arctic is an area located at the northernmost part of the Earth and includes the Arctic Ocean, Canada, Russia, Greenland, the United States, Norway, Sweden, Finland and Iceland. It consists of an ice-covered ocean, surrounded by treeless permafrost. The area can be defined as north of the Arctic Circle, the approximate limit of the midnight sun and the polar night. The average temperature in July, which is the warmest month, is below 10°C. Colder summer temperatures cause the size, abundance, productivity and variety of plants to decrease. Trees cannot grow in the Arctic, but in its warmest parts, shrubs are common and can reach 2 metres in height.

A thick blanket of snow lies several feet deep all over the ground. The sun appears for only a few brief hours each day before sinking below the horizon as blackness cloaks the land. As it vanishes, a bitter chill tightens its grip. The Arctic is not a place to be in the throes of winter; it is hostile to almost all animal life. Amphibians would freeze solid here. Nor can reptiles withstand the extreme cold. And yet there are animals here, animals that exhibit a remarkable tolerance of the most inhospitable conditions on the planet.

Less than half a metre beneath the surface of the snow, a furry white creature, no bigger than a hamster, scurries along a tunnel. It is a collared lemming. It and other members of its family have excavated a complex home within the snowfield, but it costs the lemmings

a great deal to survive here. They pay by using some of their precious and scarce food supply to generate heat within their bodies so that their biochemical processes can continue to function efficiently.

But in order to keep fuel costs to a minimum, they must conserve as much energy as they can. A thick insulating coat of fine fur covering all but the lemmings' eyes achieve this. Fur is the life preserver of the Arctic.

Only one class of animals have fur – mammals. Fur consists of dense layers of hair follicles. Hair is composed of a substance called keratin. It grows constantly, its roots embedded in the skin and surrounded by nerve fibres so that its owner can sense any movement of the hair. It is this precious fur that gives land mammals the edge necessary to survive the harsh Arctic winter. Without it, wolves, lemmings and arctic foxes alike would surely perish.

The insulation provided by fur comes not from the fur itself, but largely from the layer of air trapped within the fur. Air is an extremely effective insulator, which is the same as saying it is a poor conductor, i.e., it has a very limited ability to conduct heat away from a warm surface. Studies reveal that if a layer of air of about five centimetres could be held in place close to the skin, it would provide the same insulation as does the impressively dense winter coat of the arctic fox.

If an arctic fox or wolf is exposed to an air temperature of about minus ten degrees, the temperature near the tips of the fur will match the air temperature, but at the surface of the skin, it will be closer to thirty degrees. This represents a temperature difference of around forty degrees. Such effective insulation is only made possible by the layer of trapped air contained within the long, fine and densely packed fur.

But Arctic mammals have more in their arsenal than just fur to protect them from the elements. Unlike amphibians, reptiles and other classes of animals, they are endotherms, meaning they can generate their own body heat. This is another of the defining characteristics of mammals. It is the mammalian ability to generate heat internally that enables the arctic fox or the lemming to remain warm and active in very cold conditions.

Generating heat internally, Arctic mammals can regulate their body temperature independent of external conditions; this is known as thermoregulation. When Arctic mammals are cold, they raise their metabolic rate and produce more heat. When they are warm, the reverse happens. Together, thermoregulation and fur make Arctic mammals perfectly equipped to face the toughest conditions the Arctic can throw at them.

Questions 14-20

Instructions to follow

- Choose the correct answer A, B, C or D.

14 Animals that live in the Arctic

A ○ can withstand extremely difficult living conditions.

B ○ often freeze solid during winter.

C ○ are mainly reptilian.

D ○ are mostly frogs or toads.

15 Where do lemmings live?

- A ○ on the surface of the snow
- B ○ in tunnels built under the frozen ocean
- C ○ in wide tunnels deep underground
- D ○ about 50cm below the surface of the snow.

16 Fur is

- A ○ thick layers of hair.
- B ○ common to all animal classes.
- C ○ unhelpful to Arctic animals.
- D ○ the life preserver only for small Arctic mammals.

17 Why is trapped air a good insulator?

- A ○ It is a good conductor of heat.
- B ○ Air helps us to breathe.
- C ○ It is a bad conductor of heat.
- D ○ It absorbs heat and cold very well.

18 If the temperature at the tip of the fur of an arctic fox is minus ten degrees, the temperature at the surface of the skin will be closer to

- A ○ forty degrees.
- B ○ ten degrees.
- C ○ thirty degrees.
- D ○ thirty-five degrees.

19 What is an endotherm?

- A ○ an animal that can generate heat inside its body
- B ○ an animal that cannot generate heat inside its body
- C ○ an animal that never gets cold
- D ○ an animal that has special insulation

20 Thermoregulation and fur help Arctic mammals

- A ○ cope with hot temperatures.
- B ○ protect themselves from the elements.
- C ○ regulate the temperature of their surroundings.
- D ○ create a layer of trapped air within their fur.

Questions 21-27

Instructions to follow

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

The Arctic winter is something few animals can survive, but there are a select few that show an amazing 21 ..... of the severe winter conditions. These animals have to use their food resources to keep their body temperature high so that the biochemical 22 ..... inside them continue to run. One thing that helps them keep their bodies warm is their .....A..... which consists of thick layers of hair that provide insulation for their bodies; it is their life 24 .....

The layer of D ..... air that they also have provides very effective insulation from cold because it is not a good C ..... of heat. In the case of an Arctic mammal getting cold, it deals with it by increasing its B ..... rate to generate more heat.

Section 3

Instructions to follow

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

High-tech Switzerland

For a nation with a history of making sophisticated clocks, it is not surprising that Switzerland is the best place for precision and high-tech research. The country is so proud of two Federal Institutes of Technology, like the CERN of particle physics laboratory and a core of IBM research facilities. Also, there are two big pharmaceutical companies called Roche and Novartis. Also, who can forget Switzerland's world-famous chocolate industry?

British citizens are able to work in Switzerland vise-free and the country offers salaries of up to £72,000 per year for highly-skilled experienced researchers with the option of skiing in the lunch break. It is easy to know why Switzerland appeals to so many. In what fields are these great opportunities available?

Computing Clout

IBM is one of the global companies that has established a research hub in Switzerland. The Ruschlikon lab located in the south of Zurich draws researchers from around the world, with 80% of them coming from abroad.

This lab is a leader in digital storage technology and semiconductor and optical electronics for online networks. Projects to build a top-class nanotechnology research centre in the place are going on and will be completed by 2014.

Irene Holenweger Koeb, a manager in IBM human resources, says that the lab is looking for a wide range of disciplines including physics, chemistry and mathematics. Also, it is a thriving bioscience group working on the application of nanotechnology to life sciences and other areas. Most of the positions only accept applicants with a Ph.D. but the lab also hires approximately 100 applicants with Bachelors and Masters degrees each year.

Paul Hurley, a researcher in IBM's systems software group, in enjoying the flexible atmosphere of his work. There is a relaxed atmosphere in the office at IBM and meetings often take place over lunch or a coffee break.

As a lot of employees are not Swiss nationals, the company offers a lot of support and also has a policy of paying relocation expenses. Koeb says that it is important to gradually ease employees into their new workplace.

German lessons which are paid for by IBM are offered to new employees working in Zurich. The standard of German is different to German spoken in Zurich. Whilst Hurley has attended the classes, he says a little bit more practice is needed to notice the "Swiss-isms."

Raising the Chocolate Bar

Switzerland is known for chocolate. Jose Rubio of Lindt's human resources department says "Our company has 44 nationalities and 18 languages."

Scientists are able to find jobs within quality management, research and development and in the factory working conditions. The work of R&D is to help improve new recipes and products as well as designing and building new machines for making them. You are able to hone your skills in a well-managed company and have the pleasant task of testing the products to make sure they meet the company's high standards.

Rubio says that a foreign staff must speak at least one of the official Swiss languages. Most of the positions need a good level of German, as it is vital when working with Swiss coworkers in the production lines.

The ETH in German-speaking Zurich has a sister institution, which is the Federal Institute of Technology in French speaking Lausanne (EPFL). With over 250 research groups and 10,000 students and faculties, it is focused on interdisciplinary scientific research. The institute's technology transfer programmes ensure that practical tools and methods make it out of the lab and into the industry.

Questions 28-30

Instructions to follow

- Choose the appropriate letters A-D.

28 Ruschlikon lab located in Zurich attracts

A almost 80 per cent of research staff from overseas.
B 80 per cent of research staff domestically.
C at least 80 per cent of engineers from abroad.
D 80 per cent of staff with a PhD from overseas.

29 The lab has a plan to complete in 2014

A founding a top-class Ruschlikon lab.
B making a world-famous chocolate industry.
C founding the best nanotechnology research centre.
D researching digital storage marketing.

30 According to information in the text, the main purpose of the writer is

A ○ to survey various high-tech research in Switzerland.

B ○ to introduce attractive research centres in Switzerland.

C ○ to recruit a variety of human resources in Switzerland.

D ○ to understand the world-famous chocolate in Switzerland.

Questions 31-35

Instructions to follow

- Choose NO MORE THAN TWO WORDS from Reading Passage 3 for each answer.

Raising the chocolate bar

Switzerland is known for 31 ....., attracts scientists in quality management, research and development. Those who are working in R&D aid to improve new versions of recipes, products and design and build 32 ..... Foreign staff should fluently speak one of 33 ..... official tongues in the least. Especially, a number of workplaces need to have an advanced level of 34 ..... With over 250 research groups and 10,000 students and faculties, it emphasizes 35 ..... Scientific research.

Questions 36-40

Instructions to follow

- Do the following statements reflect the claims of the writer in Reading Passage 3?
  TRUE if the statement agrees with the information
  FALSE if the statement contradicts the information
  NOT GIVEN if there is no information on this

36 Switzerland has a reputation for the history of making precise clockwork.

37 Coffee in Switzerland is world-famous.

38 Four-fifths of the staff at the Ruschlikon in Zurich are from overseas.

39 The Ruschlikon lab is a trailblazer in only the field of semiconductors in digital storage technology.

40 Most study fields need a high level of English.

IELTS Reading Test 10

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

A song on the brain

Some songs just won't leave you alone. But this may give us clues about how our brain works

A. Everyone knows the situation where you can't get a song out of your head. You hear a pop song on the radio – or even just read the song's title and it haunts you for hours, playing over and over in your mind until you're heartily sick of it. The condition now even has a medical name 'song-in-head syndrome'.

B. But why does the mind annoy us like this? No one knows for sure, but it's probably because the brain is better at holding onto information than it is at knowing what information is important. Roger Chaffin, a psychologist at the University of Connecticut says, 'It's a manifestation of an aspect of memory which is normally an asset to us, but in this instance, it can be a nuisance.'

C. This eager acquisitiveness of the brain may have helped our ancestors remember important information in the past. Today, students use it to learn new material, and musicians rely on it to memorize complicated pieces. But when this useful function goes awry it can get you stuck on a tune. Unfortunately, superficial, repetitive pop tunes are, by their very nature, more likely to stick than something more inventive.

D. The annoying playback probably originates in the auditory cortex. Located at the front of the brain, this region handles both listening and playback of music and other sounds. Neuroscientist Robert Zatorre of McGill University in Montreal proved this some years ago when he asked volunteers to replay the theme from the TV show Dallas in their heads. Brain imaging studies showed that this activated the same region of the auditory cortex as when the people actually heard the song.

E. Not every stored musical memory emerges into consciousness, however. The frontal lobe of the brain gets to decide which thoughts become conscious and which ones are simply stored away. But it can become fatigued or depressed, which is when people most commonly suffer from song-in-head syndrome and other intrusive thoughts, says Susan Ball, a clinical psychologist at Indiana University School of Medicine in Indianapolis. And once the unwanted song surfaces, it's hard to stuff it back down into the subconscious. 'The more you try to suppress a thought, the more you get it,' says Ball. 'We call this the pink elephant phenomenon. Tell the brain not to think about pink elephants, and it's guaranteed to do so,' she says.

F. For those not severely afflicted, simply avoiding certain kinds of music can help. 'I know certain pieces that are kind of "sticky" to me, so I will not play them in the early morning for fear that they will run around in my head all day,' says Steven Brown, who trained as a classical pianist but is now a neuroscientist at the University of Texas Health Science Center at San Antonio. He says he always has a song in his head and, even more annoying, his mind never seems to make it all the way through. 'It tends to involve short fragments between, say, 5 or 15 seconds. They seem to get looped, for hours sometimes,' he says.

G. Brown's experience of repeated musical loops may represent a phenomenon called

'chunking', in which people remember musical phrases as a single unit of memory, says Caroline Palmer, a psychologist at Ohio State University in Columbus. Most listeners have little choice about what chunks they remember. Particular chunks may be especially 'sticky' if you hear them often or if they follow certain predictable patterns, such as the chord progression of rock 'n' roll music.

Palmer's research shows that the more a piece of music conforms to these patterns, the easier it is to remember. That's why you're more likely to be haunted by the tunes of pop music than by those of a classical composer such as J. S. Bach.

H. But this ability can be used for good as well as annoyance. Teachers can tap into memory reinforcement by setting their lessons to music. For example, in one experiment students who heard a history text set as the lyrics to a catchy song remembered the words better than those who simply read them, says Sandra Calvert, a psychologist at Georgetown University in Washington DC.

I. This sort of memory enhancement may even explain the origin of music. Before the written word could be used to record history, people memorized it in songs, says Leon James, a psychologist at the University of Hawaii. And music may have had an even more important role. 'All music has a message.' he says. 'This message functions to unite society and to standardise the thought processes of people in society.'

Questions 1-3

Instructions to follow

- Choose the correct answer A, B, C or D.
- Write your answers in boxes 1-3 on your answer sheet.

1 The writer says that song-in-head syndrome' may occur because the brain

A confuses two different types of memory.
B cannot decide what information it needs to retain.
C has been damaged by harmful input.
D cannot hold onto all the information it processes.

2 A tune is more likely to stay in your head if

A it is simple and unoriginal.
B you have musical training.
C it is part of your culture.
D you have a good memory.

3 Robert Zatorre found that a part of the auditory cortex was activated when volunteers

A listened to certain types of music.
B learned to play a tune on an instrument.
C replayed a piece of music after several years.
D remembered a tune they had heard previously.

Questions 4-7

Instructions to follow

- Look at the following theories (Questions 4-7) and the list of people below.
- Match each theory with the person.
- Write the correct letter A-F in boxes 4-7 on your answer sheet.

4 The memorable nature of some tunes can help other learning processes.

A ○ B ○ C ○ D ○ E ○ F ○

5 Music may not always be stored in the memory in the form of separate notes.

A ○ B ○ C ○ D ○ E ○ F ○

6 People may have started to make music because of their need to remember things.

A ○ B ○ C ○ D ○ E ○ F ○

7 Having a song going round your head may happen to you more often when one part of the brain is tired.

A ○ B ○ C ○ D ○ E ○ F ○

List of people

A Roger Chaffin
B Susan Ball
C Steven Brown
D Caroline Palmer
E Sandra Calvert
F Leon James

Questions 8-13

Instructions to follow

- Reading Passage 1 has nine paragraphs labelled A-I.
- Which paragraph contains the following information?
- Write the correct letter A-I in boxes 8-13 on your answer sheet.
- NB You may use any letter more than once.

8 a claim that music strengthens social bonds.

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○

9 two reasons why some bits of music tend to stick in your mind more than others.

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○

10 an example of how the brain may respond in opposition to your wishes.

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○

A ○ the name of the part of the brain where song-in-head syndrome begins.

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○

B ○ examples of two everyday events that can set off song-in-head syndrome.

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○

13 a description of what one person does to prevent song-in-head syndrome.

A ○ B ○ C ○ D ○ E ○ F ○ G ○ H ○ I ○

Section 2

Instructions to follow

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

Early occupations around the river Thames

A. In her pioneering survey, Sources of London English, Laura Wright has listed the variety of medieval workers who took their livings from the river Thames. The baillies of Queenhithe and Billingsgate acted as customs officers. There were conservators, who were responsible for maintaining the embankments and the weirs, and there were the garthmen who worked in the fish garths (enclosures). Then there were galleymen and lightermen and shoutmen, called after the names of their boats, and there were hookers who were named after the manner in which they caught their fish. The searcher patrolled the Thames in search of illegal fish weirs, and the tideman worked on its banks and foreshores whenever the tide permitted him to do so.

B. All of these occupations persisted for many centuries, as did those jobs that depended upon the trade of the river. Yet, it was not easy work for any of the workers. They carried most goods upon their backs, since the rough surfaces of the quays and nearby streets were not suitable for wagons or large carts; the merchandise characteristically arrived in barrels which could be rolled from the ship along each quay. If the burden was too great to be carried by a single man, then the goods were slung on poles resting on the shoulders of two men. It was a slow and expensive method of business.

C. However, up to the eighteenth century, river work was seen in a generally favourable light. For Langland, writing in the fourteenth century, the labourers working on river merchandise were relatively prosperous. And the porters of the seventeenth and early eighteenth centuries were, if anything, aristocrats of labour, enjoying high status. However, in the years from the late eighteenth to the early nineteenth century, there was a marked change in attitude. This was in part because the working river was within the region of the East End of London, which in this period acquired an unenviable reputation. By now, dockside labour was considered to be the most disreputable, and certainly the least desirable form of work.

D. It could be said that the first industrial community in England grew up around the Thames. With the host of river workers themselves, as well as the vast assembly of ancillary trades such as tavern-keepers and laundresses, food-sellers and street-hawkers, shopkeepers and marine store dealers – there was a workforce of many thousands congregated in a relatively small area. There were more varieties of business to be observed by the riverside than, in any other part of the city. As a result, with the possible exception of the area known as Seven Dials, the East End was also the most intensively inhabited region of London.

E. It was a world apart, with its own language and its own laws. From the sailors in the opium dens of Limehouse to the smugglers on the malarial flats of the estuary, the workers of the river were not part of any civilised society. The alien world of the river had entered them. That alienation was also expressed in the slang of the docks, which essentially amounted to back slang, or the reversal of ordinary words. This back slang also helped in the formulation of Cockney rhyming slang, so that the vocabulary of Londoners was directly affected by the life of the Thames.

F. The reports in the nineteenth-century press reveal a heterogeneous world of dock labour, in which the crowds of casuals waiting for work at the dock gates at 7.45 a.m. include penniless refugees, bankrupts, old soldiers, broken-down gentlemen, discharged servants, and ex-convicts. There were some 400-500 permanent workers who earned a regular wage and who were considered to be the patricians of dockside labour. However, there were some 2,500 casual workers who were hired by the shift. The work for which they competed fiercely had become ever more unpleasant.

Steam power could not be used for the cranes, for example, because of the danger of fire. So, the cranes were powered by treadmills. Six to eight men entered a wooden cylinder and, laying hold of ropes, would tread the wheel round. They could lift nearly 20 tonnes to an average height of 27 feet (8.2 metres), forty times in an hour. This was part of the life of the river unknown to those who were intent upon its more picturesque aspects.

Questions 14-19

Instructions to follow

- Reading Passage 2 has six paragraphs, A-F.
- Choose the correct heading, i-ix for A-F, from the list of headings below.
- Write the correct number, i-ix, in boxes 14-19 on your answer sheet.

List of Headings

i. A mixture of languages and nationalities

ii. The creation of an exclusive identity

iii. The duties involved in various occupations

iv. An unprecedented population density

v. Imports and exports transported by river

vi. Transporting heavy loads manually

vii. Temporary work for large numbers of people

viii. Hazards associated with riverside work

ix. The changing status of riverside occupations

14 Paragraph A

15 Paragraph B

16 Paragraph C

17 Paragraph D

18 Paragraph E

19 Paragraph F

Questions 20-21

Instructions to follow

- Choose Two letter, A-E.
- Write the correct letters, A-E, in boxes 20 & 21 on your answer sheet.

Which TWO statements are made about work by the River Thames before the eighteenth century?

A Goods were transported from the river by cart.

B The workforce was very poorly paid.

C Occupations were specialised.

D Workers were generally looked down upon.

E Physical strength was required.

Questions 22-23

Instructions to follow

- Choose two letters, A-E.
- Write the correct letters, A-E, in boxes 22 & 23 on your answer sheet.

Which TWO statements are made about life by the River Thames in the early nineteenth century?

A The area was very crowded.

B There was an absence of crime.

C Casual work was in great demand.

D Several different languages were in use.

E Inhabitants were known for their friendliness.

Questions 24-26

Instructions to follow

- Use NO MORE THAN TWO WORDS from the passage for each answer.

24 The workers in the docks were not part of any …….. society.

D The slang of the docks was a …….. of ordinary words.

26 In the nineteenth century, only a minority of dock workers received a …….. .

B Cranes were operated manually because …….. created a risk of fire.

28 Observers who were unfamiliar with London's docks found the River Thames …….. .

Section 3

Instructions to follow

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

Human Guinea Pig

There are 50 million people in the world being used as guinea pigs in clinical trials testing experimental drugs. Apart from potentially risking part of their lives, applicants must pass a severe series of tests just to be able to participate in some trials. However, acceptance means more tests, negative side effects and a considerable disturbance to their daily lives. So, what's in it for them? As journalist Alex O'Meara explains in *Chasing Medical Miracles*, some participate out of genuine altruism, whilst some are looking for cures for their own disorders. O'Meara, having diabetes himself, volunteered for a risky transplant of insulin-producing cells from the liver, and his story spread through the book.

O'Meara knows people choose to participate for life's great motivator: money. Clinical trials are a huge business, making up to $24 billion annually, and the cash they offer as compensation has become a sought-after way to make extra money. This exchange of money often involves people who are sick and vulnerable and emphasises the dark ethical waters in which current clinical trials are mired.

At intervals, the ill feel compelled to join a trial to get medical care. Some unethical researchers, desperate to recruit the large numbers needed to make their researchers statistically valid, take advantage of this. It can be difficult for ill people to take that, at best, they are taking experimental medicine and at worst they are taking nothing at all.

Desperation for money or medicine is never a basis for unbiased decision-making. How can a researcher be sure a person is giving their true consent? And if a person gets better as a result of taking an experimental drug, what happens when their drug supply finishes after the trial?

These ethical quandaries have influenced healthcare in developed countries where clinical trials are a prospering industry. According to Adriana Petryna in *When Experiments Travel*, in spite of the fact that drug companies are moving their trials to developing countries, only 10% of drug research addresses disorders that influence the world's poor. Such diseases make up to 90% of the global disease burden. Establishing ethical and legal responsibilities is also becoming harder, she reports. With an increased number of subcontractors included in trials, it is clear that no one is overly concerned about patient welfare.

From this theory, international human rights frameworks such as the Nuremberg Code should ensure that participants are not taking any positive effect. In reality, largely poor and illiterate populations are being exploited. Besides, ethical regulations in poor countries are rarely strict, therefore researchers can get away with recruiting people into HIV trials knowing that they will die without the experimental drug.

O' Meara also reports about drug company's greed and the inability of regulators to control the rapidly increasing number of trials. The US Food and Drug Administration inspects less than 1% of the 350,000 registered trial sites. Drug firms are managing non-profit organizations that are undertaking just 30% of trials. However, in spite of their faults, clinical trials are still an essential tool of modern medicine.

Questions 29-36

Instructions to follow

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

For testing experimental 29 ..... , there are 50 million people being used as guinea pigs looking for remedies to 30 ..... in clinical trials in spite of the risks throughout the world. Actually, that means people are both eager for life's considerable milestone of 31 ..... to make up for insufficient labour pay in their lives and 32 ..... to participate in a trial. These ethical dilemmas have influenced health problems in 33 ..... where drug companies encouraged their trials.
From these situations between 34 ..... and ....., international human rights frameworks like 35 ..... should inform people of poverty of the poor countries which have a lack of 36 ..... ethical regulations.

Questions 37-39

Instructions to follow

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

37 Whilst some choose to cure themselves, some participated due to.....

38 Hopelessness for either ..... or ..... does not work for fair decision-making.

39 Drug companies invest a lot of money in developing countries, causing.....

Question 40

Instructions to follow

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

Which of the following phrases best describes the main aim of Reading Passage 3?

A ○ to warn the guinea pigs are likely to have financial problems

B ○ to describe how clinical trials were rapidly increasing and how serious they were

C ○ to suggest that the Nuremberg Code is needed in other countries

D ○ to examine how drug companies promoted the use of guinea pigs

IELTS Reading Test 11

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

Growing of the Aging Society

A. American scientists say that the elderly are now healthier, happier and more independent. The results of a study that has taken place over a 14-year period will be released at the end of the month. The research will show that common health disorders suffered by the elderly are affecting fewer people and happening after in life.

B. Over the last 14 years, The National Long-term Health Care Survey has gathered data from more than 20,000 males and females over the age of 65 about their health and lifestyles. The group has analysed the results of data gathered in 1994 on conditions such as arthritis, high blood pressure and poor circulation; these were the most common medical complaints for this age group. The results show that these conditions are troubling a smaller proportion of people each year and decreasing very quickly. Other diseases suffered by the elderly including dementia, emphysema and arteriosclerosis are also affecting fewer people.

C. According to Kenneth Manton, a demographer from Duke University in North Carolina, "the question of what should be considered normal ageing has really changed." He also mentioned that diseases suffered by many people around the age of 65 in 1982 are now not occurring until people reach the age of 70-75.

D. It is clear that due to medical advances some diseases are not as prominent as they used to be. However, there were also other factors influencing this change. For instance, improvements in childhood nutrition in the first quarter of the twentieth century gave many people a better start in life than was possible before.

E. The data also shows some negative changes in public health. The research suggests that the rise of respiratory conditions such as lung cancer and bronchitis may reflect changing smoking habits and an increase in air pollution. Manton says that as we have been exposed to worse and worse pollution, it is not surprising that some people over the age of 60 are suffering as a result.

F. Manton also found that better-educated people are likely to live longer. For instance, women of 65 with less than eight years of education are expected to live to around 82. Those who studied more could be able to live seven years longer. Whilst some of this can be attributed to better-educated people usually having a higher income, Manton believes it is mainly because they pay closer attention to their health.

G. Also, the survey estimated how independent people of 65 were and found a striking trend. In the 1994 survey, almost 80% of them were able to complete activities such as eating and dressing alone as well as handling difficult tasks, like cooking and managing their financial affairs. This situation indicates an important drop among disabled elderly people in the population. If 14 years ago, the apparent trends in the US had continued, researchers believe that there would be one million disabled elderly people in today's population. Manton shows the trend saved more than $200 billion for the US's government's Medicare system, and it has suggested the elderly American population is less of a financial burden than expected.

H. The growing number of independent elderly people is probably linked to the huge increase in

home medical aids. For instance, the research shows the use of raising toilet seat covers and bath seats has increased by more than fifty per cent. Also, these developments about health benefits are reported by the MacArthur Foundation's research group for successful ageing. It found the elderly who are able to take care of themselves were more likely to stay healthy in their old age.

I. Retaining a certain level of daily physical activity may also help brain function, according to Carl Cotman, a neuroscientist at the University of California at Irvine. He found that rats exercising on a treadmill have higher levels of a brain-derived neurotrophic factor in their brains. He believes the hormone which holds neuron functions may prevent the active human's brain function from declining.

J. Teresa Seeman, a social epidemiologist at the University of Southern California in Los Angeles, was conducting the same research. She found a line between self-esteem and stress in people over 70. The elderly who do challenging activities such as driving have more control of their mind and have a lower level of the stress hormone cortisol in their brains. Chronically high levels of this hormone can cause heart disease.

K. However, an independent life may have negative points. Seeman knew that the elderly people that were living alone were able to retain higher levels of stress hormones even when sleeping. The research indicates that elderly people are happier if they can live an independent life but also acknowledge when they need help.

L. Seeman says, "With many cases of research about ageing, these results help common sense." Also, the situations show that we may be ignoring some of the simple factors. She mentions, "The sort of thing your grandmother always used to talk to you about seems to be exactly right."

Questions 1-6

Instructions to follow

- Reading Passage 1 has twelve paragraphs, A-L.
- Choose the correct heading for paragraphs B-G from the list of headings below.

List of Headings

i. Disorders strike much later in life.

ii. Drawbacks in public health.

iii. Longevity based on high education.

iv. The elderly people of today got better nutrition when they were children.

v. The elderly are becoming more well off.

vi. Most of independent people over 65 complete activities themselves.

vii. Diseases have decreased recently.

1 Paragraph B

2 Paragraph C

3 Paragraph D

4 Paragraph E

5 Paragraph F

6 Paragraph G

Questions 7-13

Instructions to follow

- Do the following statements reflect the claims of the writer in Reading Passage 1?
  TRUE if the statement agrees with the information
  FALSE if the statement contradicts the information
  NOT GIVEN if there is no information on this

7 Smoking habits are a crucial cause in some cancers.

8 The better-educated elderly people tend to live longer.

9 People over 65 can independently manage a variety of tasks.

10 Elderly people have overcome dementia as a result of home medical aids.

A Continuing physical exercises is likely to assist digestive function.

B People over 70 who still do challenging things such as driving are able to lower their level of the hormone cortisol which is linked to heart disease.

C Isolation may cause a higher level of stress hormones.

Section 2

Electric Dreams

A. The days of the internal-combustion are numbered, and the fuel cell represents the future of automotive transport, says PETER BREWER. A. Some of the world's greatest inventions have been discovered by accident. One such accident led to the discovery of the fuel cell and another led to its commercialisation. And in around 30 years, when most of the energy analysts have predicted the oil wells will run dry, motorists will be thankful for both these strange twists of fate. Why? Simply because without the fuel cell to replace the combustion engine, private motoring as we all know it would be restricted to only those who could afford the high price.

B. The exact date of the discovery of the fuel cell is not known, but historians agree it most likely occurred around 1938 in the laboratories of British physicist Sir William Grove, who one day disconnected a simple electrolytic cell (in which hydrogen and oxygen are produced when water contacts an electric current running through a platinum wire) and reversed the flow of current. As author records in his book Powering the Future, Grove realized that just as he could use electricity to split water into hydrogen and oxygen it should be possible to generate electricity by combining these two gases.

C. The principle behind the fuel cell is simple. Hydrogen and oxygen, two of the most common elements in the world, are a very explosive combination. But separate them with a sophisticated platinum coated barrier and an electro chemical reaction takes place, where positively charged hydrogen ions react with oxygen and leave the hydrogen electrons behind. It is this reaction, the excess electrons on one side of the barrier and the deficit of electrons on the other that creates electrical energy.

D. The early development of the fuel cell was fraught with problems and high cost. But by 1954 US giant General Electric had produced a prototype that proved sufficiently effective to interest NASA. The Gemini space programme proved the viability of the fuel cell to provide electrical power. The spacecraft used six stacks of cells with three cells in each stack. The electrical power output from each stack was quite modest – just one kilowatt and as a byproduct, produced half a litre of water for each kilowatt hour of operation. But the Gemini Cells were very unstable and required constant monitoring.

E. At this time if anyone had suggested to Canadian Scientist Geoffrey Ballard that he would become a world leader in fuel cell technology, he would have laughed. Ballard's scientific background was actually geophysics, but during the oil-crisis of 1973, the US government asked the Canadian to explore alternative forms of energy. Ballard threw himself into the project enthusiastically but soon became disillusioned by the politics of the programme. Energy systems take a long time to develop, Ballard said. The short-term vision of politicians, who voted to fund such projects in the desire for quick results to bolster their re-election chances, were frustrating for the scientists. However, since the US government lacked the vision for the job, he decided to tackle it himself.

F. The big breakthrough on Ballard's fuel cell came by accident in the search for cheaper materials. Up until late 1986, Ballard's team had worked with only one type of fuel cell membrane manufactured by DuPont, but Dow Chemical had also developed a similar membrane, which had not been released for sale. Ballard's team tracked down an experimental sample of the Dow material, put it into a fuel cell and set up a standard test. Within a few minutes the fuel cell was generating so much electricity on the test bench that it had melted through the power-output cable.

G. Ballard immediately knew he had a saleable product. The problem was: Should he aim his fuel

cell at small markets like military field generators, wheelchairs and golf carts, or try to sell it as a full blown alternative to the combustion engine? “It was so needed and the world was ready for it,” Ballard said. “Los Angeles is dying; Vancouver is going to be eaten alive by its own pollution very shortly. It seemed like a time to go for broke.” Ballard Power Systems first built a small bus to demonstrate the technology, and then an even bigger bus.

H. As a result a number of multinational motor manufacturers, such as General Motors, Mitsubishi and Daimler-Benz all tested Ballard’s cells. Finally, Daimler formed an alliance with Ballard that has yielded some impressive prototypes, including a fully driveable fuel cellpowered A-class Mercedes-Benz compact car, known as Necar 4. Daimler Chlysler, as the merged Daimler-Benz and Chlysler Corporation is now known, says the fuel cell represents the future of automotive transport. “The significance of this technological advancement (the fuel cell) is comparable to the impact the microchip had on computer technology when it replaced the transistor,” said Dr Ferdinand Panik, the head of Daimler Chlysler’s fuel cell development team.

Questions 14-21

Instructions to follow

- There are 8 paragraphs numbered A-H in Reading Passage 2.
- From the list below numbered i- x, choose a suitable heading for the paragraphs.
- There are more headings than paragraphs, so you will not use all the headings.

14 Paragraph A

15 Paragraph B

16 Paragraph C

17 Paragraph D

18 Paragraph E

19 Paragraph F

20 Paragraph G

21 Paragraph H

i. A conflict of interests
ii. Science is sometimes a question of luck
iii. Using the fuel cell in different ways
iv. How does it work?
v. Deciding how to exploit the new product
vi. Using the fuel cell to be the first in the space race
vii. A key stage in the development of fuel cell
viii. A first step on the road to a new source of energy
ix. Applying the new technology on a global scale
x. The first fuel cell is tested

Questions 22-24

Instructions to follow

- Choose the most appropriate letter A B C or D.

22 The fuel cell generates electricity because

A hydrogen and oxygen can be used to create controlled explosions

B of the reaction which occurs when hydrogen and oxygen are separated

C hydrogen and oxygen are both gases

D hydrogen and oxygen both contain electrons

A 23. The Gemini space programme demonstrated that

A The fuel cell was too difficult to use in space programmes

B The fuel cell can only work with pure oxygen

C Generating a substantial amount of electricity requires many fuel cells

D The fuel cell could be used successfully

24 The US government asked Ballard to carry out fuel cell research because

A He was an expert in his field

B supplies of oil were running out

C They wanted to find new sources of energy

D He offered to work completely independently.

Questions 25-27

Instructions to follow

- Complete the sentences below by taking words from the passage. Use NO MORE THAN THREE WORDS.

D 25. The key step in the development of fuel cell occurred completely _____.

C 6. Ballard decided that the fuel cell could be used to reduce _____in large cities.

B 7. In an attempt to produce a more ecological car, Ballard _____with a major automobile corporation.

Section 3

History of telegraph in communication

Jean-Antoine Nollet was a French clergyman and physicist. In 1746 he gathered about two hundred monks into a circle about a mile (1.6 km) in circumference, with pieces of iron wire connecting them. He then discharged a battery of Leyden jars through the human chain and observed that each man reacted at substantially the same time to the electric shock, showing that the speed of electricity's propagation was very high. Given a more humane detection system, this could be a way of signaling over long distances. In 1748, Nollet invented one of the first electrometers, the electroscope, which detected the presence of an electric charge by using electrostatic attraction and repulsion.

After the introduction of the European semaphore lines in 1792, the world's desire to further its ability to communicate from a distance only grew. People wanted a way to send and receive news from remote locations so that they could better understand what was happening in the world around them—not just what was going on in their immediate town or city. This type of communication not only appealed to the media industry, but also to private individuals and companies who wished to stay in touch with contacts. In 1840 Charles Wheatstone from Britain, with William Cooke, obtained a new patent for a telegraphic arrangement.

The new apparatus required only a single pair of wires, but the telegraph was still too costly for general purposes. In 1 845, however, Cooke and Wheatstone succeeded in producing the single needle apparatus, which they patented, and from that time the electric telegraph became a practical instrument, soon adopted on all the railway lines of the country.

It was the European optical telegraph, or semaphore, that was the predecessor of the electrical

recording telegraph that changed the history of communication forever. Building on the success of the optical telegraph, Samuel F. B. Morse completed a working version of the electrical recording telegraph, which only required a single wire to send code of dots and dashes. At first, it was imagined that only a few highly skilled encoders would be able to use it but it soon became clear that many people could become proficient in Morse code. A system of lines strung on telegraph poles began to spread in Europe and America.

In the 1840s and 1850s several individuals proposed or advocated construction of a telegraph cable across the Atlantic Ocean, including Edward Thornton and Alonzo Jackman. At that time there was no material available for cable insulation and the first breakthrough came with the discovery of a rubber-like latex called gutta-percha. Introduced to Britain in 1843, gutta-percha is the gum of a tree native to the Malay Peninsula and Malaysia.

After the failure of their first cable in 1850, the British brothers John and Jacob Brett laid a successful submarine cable from Dover to Calais in 1851. This used two layers of gutta-percha insulation and an armoured outer layer. With thin wire and thick insulation, it floated and had to be weighed down with lead pipe.

In the case of first submarine-cable telegraphy, there was the limitation of knowledge of how its electrical properties were affected by water. The voltage which may be impressed on the cable was limited to a definite value. Moreover, for certain reasons, the cable had an impedance associated with it at the sending end which could make the voltage on the cable differ from the voltage applied to the sending-end apparatus. In fact, the cable was too big for a single boat, so two had to start in the middle of the Atlantic, join their cables and sail in opposite directions.

Amazingly, the first official telegram to pass between two continents was a letter of congratulation from Queen Victoria of the United Kingdom to the President of the United States,

James Buchanan, on August 16, 1 858. However, signal quality declined rapidly, slowing transmission to an almost unusable speed and the cable was destroyed the following month.

To complete the link between England and Australia, John Pender formed the British-Australian Telegraph Company. The first stage was to lay a 557nm cable from Singapore to Batavia on the island of Java in 1870. It seemed likely that it would come ashore at the northern port of Darwin from where it might connect around the coast to Queensland and New South Wales. It was an undertaking more ambitious than spanning the ocean. Flocks of sheep had to be driven with the 400 workers to provide food. They needed horses and bullock carts and, for the parched interior, camels. In the north, tropical rains left the teams flooded.

In the centre, it seemed that they would die of thirst. One critical section in the red heart of Australia involved finding a route through the McDonnell mountain range and then finding water on the other side. The water was not only essential for the construction teams. There had to be telegraph repeater stations every few hundred miles to boost the signal and the staff obviously had to have a supply of water.

On August 22, 1872, the Northern and Southern sections of the Overland Telegraph Line were connected, uniting the Australian continent and within a few months, Australia was at last in direct contact with England via the submarine cable, too. This allowed the Australian Government to receive news from around the world almost instantaneously for the first time. It could cost several pounds to send a message and it might take several hours for it to reach its destination on the other side of the globe, but the world would never be the same again. The telegraph was the first form of communication over a great distance and was a landmark in human history.

Questions 28-32

Instructions to follow

- Do the following statements agree with the information given in Reading Passage 3.
- TRUE if the statement agrees with the information
- FALSE if the statement contradicts the information
- NOT GIVEN if there is no information on this

28 People increasingly hoped to explore ways of long-distance communication in the late eighteenth century.

29 Using Morse Code to send message needed special personnel to first simplify the message,

30 Morse was a famous inventor before he invented the code.

31 Water was significant to early telegraph repeater stations on the continent.

32 The Australian Government offered funds for the first overland line across the continent.

Questions 33-40

Instructions to follow

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

33 Why did Charles Wheatstone's telegraph system fail to come into common use in the beginning?

C4. What material was used for insulating cable across the sea?

A5. What was used by British pioneers to increase the weight of the cable in the sea?

36. What would occur in the submarine cable when the voltage was applied?

37 Who did the Queen first send a message to, across the Atlantic ocean?

38 What animals were used to carry the cable through the desert?

39 What weather condition delayed construction in north Australia?

40 How long did it take to send a telegraph message from Australia to England in 1872?

IELTS Reading Test 12

Section 1

Instructions to follow

- You should spend 20 minutes on Questions 1-13 which are based on Reading Passage 1

The Green Revolution in China

A couple of weeks ago, China's highest government body published their conclusions from the second research session on continental climate change over a period of twelve months. Due to China's new global role and the number of unprecedented environmental issues in China, the Chinese prime minister was very keen to raise climate change as an important issue at the upcoming G8 summit in Hokkaido, Japan.

It should be highlighted that the Chinese central government also had a similar meeting and that China is a rapidly industrializing country with new coal-fueled power plants opening every week. China is like a terrifying carbon-guzzling monster. As a result of thirty years of industrialization, China now has the highest level of carbon dioxide emissions in the world. Carbon dioxide emissions are increasing up to eight per cent a year. The EU achieved a twenty per cent reduction, but China's emission rate was twice as much approaching the 2010 IPCC deadline for carbon dioxide emissions reduction.

However, it could be misleading to put too much emphasis on these statistics. A non-governmental organization (Climate Group) newspaper report presents a slightly different picture. According to the Clean Revolution in China, China is a nation that is more than aware of

its environmental issues but also has the potential to achieve a second miracle in 30 years.

The environmental price of the first “miracle” was that Chinese people always saw their daily lives. That’s why most of the policies are related to energy efficiency, energy-saving and other alternative energy sources. Those policies have already been met with some concern.

Whilst the personal sectors are so strong and developing, they are able to aid the central government to introduce laws, like the National Renewable Energy Law in 2006. This has set hard targets, including increasing the amount of energy made from new renewable sources from eight per cent to fifteen per cent until 2020. Also, it has guaranteed at least three per cent of renewable energy sources, such as biomass, solar and wind.

Both wind and solar power are so successful, but their origins are very different. With 6 gigawatts of energy made from wind turbines, surprisingly China is now ranked behind Germany, the US, Spain and India. Also, some believe China will reach 100 GW by 2020.

Wind power successfully shows that with central government aid China is ready for new policies, subsidies and advanced technology. This situation also has a role in the domestic market. The amount of electricity produced by wind farms can be a burden to fund.

Even though western countries invented an open marketplace set to dominate in China, there were few domestic incentives for solar power. In the global solar photovoltaic cell market, it is second only to Japan and growing fast. In China, the solar market has been a small business, because the cells are so expensive. This puts pressure on the government to rapidly follow up on their policies, for example, the role of the Climate Group is important in developing domestic markets.

However, the image of new coal-fueled power stations still looms large as they are opening every week. It is hard to imagine that China has achieved a 10.5 per cent of growth rate without such stations in the last quarter. However, how many people actually know that China has been closing its small power stations over the last couple of years? Step by step China is reducing its small power stations, first the 50-megawatt ones then the 100-megawatt ones and next will be the 300-megawatt power stations.

This policy is operated by the Chinese central government and backs up the new generation of coal station using the most advanced technologies with supercritical and ultra-supercritical improved clean coal. Capture functions and plants of carbon are researched and developed, but advanced thinking for the future is based on the technology of Integrated Gasification Combined Cycle (IGCC) that turn coal materials into synthetic gas to make power.

These days, Chinese consumers demand better homes and vehicles. Public awareness of energy-saving is on the rise. The Chinese government introduced a standard fuel economy for vehicles in 2004 of 15.6 kilometers per litre. This is higher than the US, Canada and Australia but behind Europe and Japan. In the meantime, in spite of a high 20 per cent tax on SUVs (Sport Utility Vehicles), the sale of these sorts of cars continues to increase.

Up to now, China has been the kingdom of the bicycle, importing the electric bike at 1,500 yuan ($220) per vehicle. Some of these vehicles have adopted an intelligent recovery system similar to that of hybrid cars. In 2007, the sale of electric bikes increased considerably and China is estimated to make up three-quarters of the world electric vehicle market.

China, already, is doing a lot on the bottom line. So, could it do more? The answer is yes, China should learn and open its mind through international communities. According to the Climate Group, they report the world should refine their image of China, just not fear it and,

constructively, work in unison. At the same time, China's government should develop a clean revolution and maintain internal pressure for improvements.

Questions 1-7

Instructions to follow

- Do the following statements reflect the claims of the writer in Reading Passage 1?
- In boxes 1-7 on your answer sheet, write
  YES if the statement reflects the opinion of the writer
  NO if the statement contradicts the opinion of the writer
  NOT GIVEN if it is impossible to say what the writer thinks about this

1 The Central Government of China concluded the second research scheme of climate change in less than one year.

2 The main topic of the G8 Meeting in Japan was to discuss greenhouse gas emissions.

3 The Chinese Government must compensate the European Union for the loss of climate change.

4 NGO's group reported about the truth of problems of a climate change in China.

5 Solar energy has increased the amount of energy.

6 With different launching, both wind and solar power are inefficient.

7 The high cost of cells causes less activity in the solar market in China.

Questions 8-13

Instructions to follow

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

8 China is emitting …… of the outstanding rates in the world.

9 Statistics that can be misleading have been corrected by a ……

10 In 2006 ……. has set a hard target, waxing the amount of renewable sources.

A 1. What are the renewable sources mentioned in the passage? ……

B 2. Wind energy is based on subsidies, policies and the equitable ……

13 …….. should support to develop the domestic market in China facing financial problems.

Section 2

Tasmanian Tiger

A. Although it was called tiger, it looked like a dog with black stripes on its hack and it was the largest known carnivorous marsupial of modern times. Yet, despite its fame for being one of the most fabled animals in the world, it is one of the least understood of Tasmania's native animals. The scientific name for the Tasmanian tiger is Thylacine and it is believed that they have become extinct in the 20th century.

B. Fossils of thylacines dating from about almost 12 million years ago have been dug up at various places in Victoria, South Australia and Western Australia. They were widespread in Australia 7,000 years ago, but have probably been extinct on the continent for 2,000 years ago. This is believed to be because of the introduction of dingoes around 8,000 years ago. Because of disease, thylacine numbers may have been declining in Tasmania at the time of European settlement 200 years ago, but the decline was certainly accelerated by the new arrivals. The last known Titsmanijin Tiger died in I lobar! Zoo in 193fi and the animal is officially classified as extinct. Technically, this means that it has not been officially sighted in the wild or captivity for 50 years. However, there are still unsubstantiated sightings.

C. Hans Naarding, whose study of animals had taken him around the world, was conducting a survey of a species of endangered migratory bird. The cat he saw that night is now regarded as the most credible sighting recorded of thylacine that many believe has been extinct for more than 70 years.

D. "I had to work at night." Naarding takes up the story. "I was in the habit of intermittently

shining a spotlight around. The beam fell on an animal in front of the vehicle, less than 10m away. Instead of risking movement by grabbing for a camera, I decided to register very carefully what I was seeing. The animal was about the size of a small shepherd dog, a very healthy male in prime condition. What set it apart from a dog, though, was a slightly sloping hindquarter, with a fairly thick tail being a straight continuation of the backline of the animal. It had 12 distinct stripes on its back, continuing onto its butt. I knew perfectly well what I was seeing. As soon as I reached for the camera, it disappeared into the tea-tree undergrowth and scrub."

E. The director of Tasmania's National Parks at the time, Peter Morrow, decided in his wisdom to keep Naarding's sighting of the thylacine secret for two years. When the news finally broke, it was accompanied by pandemonium. "I was besieged by television crews, including four to five from Japan, and others from the United Kingdom, Germany, New Zealand and South America," said Naarding.

F. Government and private search parties combed the region, but no further sightings were made. The tiger, as always, had escaped to its lair, a place many insist exists only in our imagination. But since then, the thylacine has staged something of a comeback, becoming part of Australian mythology.

G. There have been more than 4,000 claimed sightings of the beast since it supposedly died out, and the average claims each year reported to authorities now number 150. Associate professor of zoology at the University of Tasmania, Randolph Rose, has said he dreams of seeing a thylacine. But Rose, who in his 35 years in Tasmanian academia has fielded countless reports of thylacine sightings, is now convinced that his dream will go unfulfilled.

H. "The consensus among conservationists is that usually; any animal with a population base of less than 1,000 is headed for extinction within 60 years," says Rose. "Sixty years ago, there was

only one thylacine that we know of, and that was in Hobart Zoo," he says.

I. Dr. David Pemberton, curator of zoology at the Tasmanian Museum and Art Gallery, whose PhD thesis was on the thylacine, says that despite scientific thinking that 500 animals are required to sustain a population, the Florida panther is down to a dozen or so animals and, while it does have some inbreeding problems, is still ticking along. "I'll take a punt and say that, if we manage to find a thylacine in the scrub, it means that there are 50-plus animals out there."

J. After all, animals can be notoriously elusive. The strange fish is known as the coelacanth' with its "proto-legs", was thought to have died out along with the dinosaurs 700 million years ago until a specimen was dragged to the surface in a shark net off the south-east coast of South Africa in 1938.

K. Wildlife biologist Nick Mooney has the unenviable task of investigating all "sightings" of the tiger totaling 4,000 since the mid-1980s, and averaging about 150 a year. It was Mooney who was first consulted late last month about the authenticity of digital photographic images purportedly taken by a German tourist while on a recent bushwalk in the state. On face value, Mooney says, the account of the sighting, and the two photographs submitted as the proof amount to one of the most convincing cases for the species' survival he has seen.

L. And Mooney has seen it all – the mistakes, the hoaxes, the illusions and the plausible accounts of sightings. Hoaxers aside, most people who report sightings end up believing they have been a thylacine, and are themselves believable to the point they could pass a lie-detector test, according to Mooney. Others, having tabled a creditable report, then become utterly obsessed like the Tasmanian who has registered 99 thylacine sightings to date. Mooney has seen individuals bankrupted by the obsession, and families destroyed. "It is a blind optimism that something is, rather than a cynicism that something isn't," Mooney says. "If something crosses

the road, it's not a case of 'I wonder what that was?' Rather, it is a case of 'that's a thylacine!' It is a bit like a gold prospector's blind faith, 'it has got to be there'."

M. However, Mooney treats all reports on face value. "I never try to embarrass people or make fools of them. But the fact that I don't pack the car immediately they ring can often be taken as ridicule. Obsessive characters get irate that someone in my position is not out there when they think the thylacine is there."

N. But Hans Naarding, whose sighting of a striped animal two decades ago was the highlight of "a life of animal spotting", remains bemused by the time and money people waste on tiger searches. He says resources would be better applied to save the Tasmanian devil, and helping migratory bird populations that are declining as a result of shrinking wetlands across Australia.

O. Could the thylacine still be out there? "Sure," Naarding says. But he also says any discovery of surviving thylacines would be "rather pointless". "How do you save a species from extinction? What could you do with it? If there are thylacines out there, they are better off right where they are."

Questions 14-17

Instructions to follow

- Complete the summary below.
- Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer.
- Write your answers in boxes 14-17 on your answer sheet.

The Tasmanian tiger, also called thylacine, resembles the look of a dog and has ……14…… on its fur coat. Many fossils have been found, showing that thylacines had existed as early as ……15…… years ago. They lived throughout ……16…… before disappearing from ……17……

the mainland. And soon after the …… settlers arrived the size of the thylacine population in Tasmania shrunk at a higher speed.

Questions 18-23

Instructions to follow

- Look at the following statements (Questions 18-23) 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 18-23 on your answer sheet.
- NB You may use any letter more than once.

18 His report of seeing a live thylacine in the wild attracted international interest.

A ○ B ○ C ○ D ○

19 Many eye-witnesses' reports are not trustworthy.

A ○ B ○ C ○ D ○

20 It doesn't require a certain number of animals to ensure the survival of a species.

A ○ B ○ C ○ D ○

21 There is no hope of finding a surviving Tasmanian tiger.

A ○ B ○ C ○ D ○

22 Do not disturb them if there are any Tasmanian tigers still living today.

A ○ B ○ C ○ D ○

23 The interpretation of evidence can be affected by people's beliefs.

A ○ B ○ C ○ D ○

List of People

A Hans Naarding

B Randolph Rose

C David Pemberton

D Nick Mooney

Questions 24-26

Instructions to follow

- Choose the correct letter A, B, C or D.
- Write the correct letter in boxes 24-26 on your answer sheet.

24 Hans Naarding's sighting has resulted in

A government and organisations' cooperative efforts to protect thylacine

B extensive interests to find a living thylacine.

C increase in the number of reports of thylacine worldwide.

D growth of popularity of thylacine in literature.

25 The example of the coelacanth is to illustrate

A it lived in the same period with dinosaurs.

B has dinosaurs evolved legs.

C some animals are difficult to catch in the wild.

D extinction of certain species can be mistaken.

26 Mooney believes that all sighting reports should be

A given some credit as they claim even if they are untrue.

B acted upon immediately.

C viewed as equally untrustworthy.

D questioned and carefully investigated.

Section 3

Left or Right?

A. Creatures across the animal kingdom have a preference for one foot, eye or even antenna. The cause of this trait, called lateralisation, is fairly simple: one side of the brain, which generally controls the opposite side of the body, is more dominant than the other when processing certain tasks. This does, on some occasions, let the animal down, such as when a toad fails to escape from a snake approaching from the right, just because it's right eye is worse at spotting danger than its left. So why would animals evolve a characteristic that seems to endanger them?

B. For many years it was assumed that lateralisation was a uniquely human trait, but this notion rapidly fell apart as researchers started uncovering evidence of lateralisation in all sorts of animals. For example, In the 1970s. Lesley Rogers, now at the University of New England in Australia, was studying memory and learning in chicks. She had been injecting a chemical into chicks' brains to stop them learning how to spot grains of food among distracting pebbles, and was surprised to observe that the chemical only worked when applied to the left hemisphere of the brain. That strongly suggested that the right side of the chicks brain played little or no role in the learning of such behaviours. Similar evidence appeared in songbirds and rats around same time, and since then, researchers have built up an impressive catalogue of animal lateralisation.

C. In some animals, lateralisation is simply a preference for a single paw or foot, while in others it appears in more general patterns of behaviour. The left side of most vertebrate brains, for example, seems to process and control feeding. Since the left hemisphere processes input from the right side of the body, that means animals as diverse as fish, toads and birds are more likely to attack prey or food items viewed with their right eye. Even humpback whales prefer to use the

right side of their jaws to scrape sand eels from the ocean floor.

D. Genetics plays a part in determining lateralisation, but environmental factors have an impact too. Rogers found that a chick's lateralisation depends on whether it is exposed to light before hatching from its egg - if it is kept in the dark during this period, neither hemisphere becomes dominant. In 2004, Rogers used this observation to test the advantages of brain bias in chicks faced with the challenge of multitasking. She hatched chicks with either strong or weak lateralisation, then presented the two groups with food hidden among small pebbles and the threatening shape of a fake predator flying overhead. As predicted, the birds incubated in the light looked for food mainly with their right eye, while using the other to check out the predator The weakly-lateralized chicks, meanwhile, had difficulty performing these two activities simultaneously.

E. Similar results probably hold true for many other animals. In 2006, Angelo Bisazza at the University of Padua set out to observe the differences in feeding behaviour between strongly-lateralized and weakly-lateralized fish. He found that strongly-lateralized individuals were able to feed twice as fast as weakly-lateralized ones when there was a threat of a predator looming above them. Assigning different jobs to different brain halves may be especially advantageous for animals such as birds or fish, whose eyes are placed on the sides of their heads. This enables them to process input from each side separately, with different tasks in mind.

F. And what of those animals who favour a specific side for almost all tasks? In 2009, Maria Magat and Culum Brown at Macquarie University in Australia wanted to see if there was general cognitive advantage in lateralisation. To investigate, they turned to parrots, which can be either strongly right- or left-footed, or ambidextrous (without dominance). The parrots were given the intellectually demanding task of pulling a snack on a string up to their beaks, using a coordinated

combination of claws and beak. The results showed that the parrots with the strongest foot preferences worked out the puzzle far more quickly than their ambidextrous peers.

G. A further puzzle is why are there always a few exceptions, like left-handed humans, who are wired differently from the majority of the population? Giorgio Vallortigora and Stefano Ghirlanda of Stockholm University seem to have found the answer via mathematical models. These have shown that a group of fish is likely to survive a shark attack with the fewest casualties if the majority turn together in one direction while a very small proportion of the group escape in the direction that the predator is not expecting.

H. This imbalance of lateralisation within populations may also have advantages for individuals. Whereas most co-operative interactions require participants to react similarly, there are some situations - such as aggressive interactions - where it can benefit an individual to launch an attack from an unexpected quarter. Perhaps this can portly explain the existence of left-handers in human societies. It has been suggested that when it comes to hand-to-hand fighting, left-handers may have the advantage over the right-handed majority. Where survival depends on the element of surprise, it may indeed pay to be different.

Questions 27-30

Instructions to follow

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

27 In the 1970s, Lesley Rogers discovered that

A ○ B ○ C ○ D ○ E ○ F ○

28 Angelo Bisazza's experiments revealed that

A ○ B ○ C ○ D ○ E ○ F ○

29 Magat and Brown's studies show that

A ○ B ○ C ○ D ○ E ○ F ○

30 Vallortigora and Ghirlanda's research findings suggest that

A ○ B ○ C ○ D ○ E ○ F ○

A lateralisation is more common in some species than in others.

B it benefits a population if some members have a different lateralisation than the majority.

C lateralisation helps animals do two things at the same time.

D lateralisation is not confined to human beings.

E the greater an animal's lateralisation, the better it is at problem-solving.

F strong lateralisation may sometimes put groups of animals in danger.

Questions 31-35

Instructions to follow

- Complete the summary below. Choose ONE WORD ONLY from the passage.

Lesley Rogers' 2004 Experiment

Lateralisation is determined by both genetic and _____31_____ influences. Rogers found that chicks whose eggs are given _____32_____during the incubation period tend to have a stronger lateralisation. Her 2004 experiment set out to prove that these chicks were better at

_____than weakly lateralized chicks. As expected, the strongly lateralized birds in the experiment were more able to locate _____ using their right eye while using their left eye to monitor an imitation _____located above them.

Questions 36-40

Instructions to follow

- Reading Passage 3 has eight paragraphs, A-H.
- Which paragraph contains the following information?

B description of a study which supports another scientist's findings.

37 the suggestion that a person could gain from having an opposing lateralisation to most of the population.

38 reference to the large amount of knowledge of animal lateralisation that has accumulated.

39 research findings that were among the first to contradict a previous belief.

40 a suggestion that lateralisation would seem to disadvantage animals.

Answer Keys

Reading Test 1

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	iv	15	C	28	C
2	vi	16	A	29	D
3	v	17	B	30	A
4	vii	18	F	31	G
5	B	19	D	32	E
6	D	20	D	33	B
7	D	21	B	34	F
8	A	22	A	35	C
9	Policy	23	C	36	A
10	(explicit) guidelines	24	Yes	37	C
11	Curriculum	25	Not Given	38	Natural Language
12	Victims	26	No	39	Eugenicists

13	Playful fighting	27	Not Given	40	Official Recognition
14	D				

Reading Test 2

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	B	14	C	28	Trade not aid
2	C	15	A	29	Coffee
3	D	16	A	30	A tiny number
4	A	17	D	31	Positively
5	B	18	B	32	High prices
6	A	19	C	33	D
7	E	20	D	34	A
8	D	21	B	35	H
9	G	22	Workplace injury	36	B
10	H	23	16.6 weeks	37	No
11	Not Given	24	7%	38	Yes
12	False	25	Golf	39	Not Given
13	Not Given	26	massage	40	No
		27	workloads		

Reading Test 3

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	E	14	iii	27	D
2	C	15	i	28	D
3	H	16	v	29	A
4	B	17	iv	30	C
5	C	18	ii	31	A
6	B	19	vi	32	A
7	B	20	D	33	High tides
8	A	21	C	34	Agriculture production
9	False	22	A	35	Coastal boundaries
10	Not Given	23	B	36	Not Given
11	False	24	B	37	Not Given
12	True	25	A	38	No
13	True	26	D	39	Yes

	40	No

Reading Test 4

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	False	14	C	27	A
2	True	15	F	28	D
3	Not Given	16	E	29	A
4	True	17	H	30	C
5	False	18	A	31	E
6	Not Given	19	D	32	B
7	Sizes	20	Not Given	33	G
8	messages	21	No	34	F
9	Web surfing	22	Not Given	35	Carbon emissions/carbon dioxide/CO2 emissions
10	attention	23	Yes	36	Powerful lobbies/lobby groups
11	bloggers	24	Yes	37	Solar

12	Scientific research	25	Yes	38	Massive state subsidies
13	nature	26	No	39	Untried
				40	$0.0686 kwh / $0.0686 per kilowatt-hour

Reading Test 5

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	Yes	14	E	27	C
2	No	15	B	28	G
3	No	16	G	29	A
4	Not Given	17	C	30	E
5	No	18	A	31	B
6	B	19	D	32	F
7	C	20	F	33	H
8	D	21	B	34	D
9	A	22	True	35	False
10	B	23	Not Given	36	True
11	D	24	True	37	False
12	A	25	False	38	True
13	F	26	D	39	Missionaries and traders

	40	Demographic triumph

Reading Test 6

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	True	14	C	27	Yes
2	Not Given	15	D	28	Not Given
3	Not Given	16	A	29	No
4	False	17	K	30	Not Given
5	Pith	18	I	31	Social division
6	Terpenes	19	B	32	Machines
7	Alkaloids	20	L	33	John Fredersen
8	Detoxify	21	J	34	Abstract
9	Hooks	22	True	35	Function
10	G	23	False	36	Efficiency
11	D	24	True	37	C
12	E	25	False	38	A
13	C	26	True	39	B

	40	D

Reading Test 7

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	False	15	True	28	Land
2	Not Given	16	True	29	Poor
3	Not Given	17	False	30	Aid
4	Not Given	18	Not Given	31	Business
5	Iii	19	False	32	Communities
6	V	20	Not Given	33	China
7	Vii	21	A	34	Geography
8	Ii	22	D	35	Investment
9	I	23	B	36	Education
10	Ix	24	C	37	34
11	viii	25	C	38	Suffering
12	Vi	26	D	39	C, E (in either order)
13	Iv	27	D	40	E, C (in either order)

14	B	

Reading Test 8

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	D	14	ii	27	C
2	D	15	iv	28	A
3	C	16	x	29	B
4	C	17	vi	30	D
5	B	18	i	31	I
6	D	19	vii	32	D
7	A	20	xii	33	J
8	B	21	Homesteads	34	F
9	Royal Antelope	22	Agricultural output	35	C
10	The auroch	23	Wheat	36	Yes
11	Long, Splayed hooves	24	Company	37	No
12	Arid Desert	25	Police force	38	No
13	Pronghorn	26	Transcontinental railway	39	Not Given

	40	Yes

Reading Test 9

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	False	14	A	28	A
2	True	15	D	29	C
3	Not Given	16	A	30	B
4	True	17	C	31	Chocolate
5	True	18	C	32	Machines
6	Clay	19	A	33	Swiss
7	Tempering wheel	20	B	34	German
8	Moulds	21	Tolerance	35	Interdisciplinary
9	Sand	22	Processes	36	True
10	Strength	23	Fur	37	Not Given
11	Kiln	24	Preserver	38	True
12	Leaves	25	Trapped	39	False
13	20 millimeters	26	Conductor	40	False

	27	Metabolic	

Reading Test 10

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	B	14	iii	29	Drugs
2	A	15	vi	30	Their own disorders
3	D	16	ix	31	Money
4	E	17	iv	32	illness
5	D	18	ii	33	Developing countries
6	F	19	vii	34	Ethical, legal responsibilities
7	B	20	C, E (in either order)	35	(The) Nuremberg code
8	I	21	E, C (in either order)	36	Strict
9	G	22	A, C (in either order)	37	Genuine altruism
10	E	23	C, A (in either order)	38	Money, Medicine
11	D	24	Civilised	39	Ethical quandaries

12	A	25	Reversal	40	B
13	F	26	Regular wage		
		27	Stream power		
		28	Picturesque		

Reading Test 11

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	vii	14	ii	28	True
2	i	15	viii	29	False
3	Iv	16	iv	30	Not Given
4	Ii	17	x	31	True
5	Iii	18	i	32	Not Given
6	vi	19	vii	33	Costly
7	Not Given	20	v	34	Gutta-Percha
8	True	21	ix	35	Lead pipe
9	True	22	B	36	Impedance
10	Not Given	23	D	37	James Buchanan
11	False	24	C	38	Camels
12	True	25	By accident	39	Tropical rains

13	False	26	Pollution	40	Several hours
		27	Formed an alliance		

Reading Test 12

Section 1		Section 2		Section 3	
Question	**Answer**	**Question**	**Answer**	**Question**	**Answer**
1	No	14	Black stripes	27	D
2	No	15	12 million	28	C
3	Not Given	16	Australia	29	E
4	Yes	17	European	30	B
5	Not Given	18	A	31	Environmental
6	Not Given	19	D	32	Light
7	Yes	20	C	33	Multitasking
8	Carbon dioxide	21	B	34	Food
9	NGO	22	A	35	Predator
10	Renewable Energy Law	23	D	36	E
11	Solar, Wind, Biomass	24	B	37	H

12	Technology	25	D	38	B
13	The climate group	26	A	39	B
				40	A