IELTS Academic Reading Sample**109**- The Keyless Society

You should spend about 20 minutes on Questions 27-40 which are based on Reading Passage 110 on the following pages.

Questions 27-33

*Reading Passage 3 has eight paragraphs (**A-H**).*

*Choose the most suitable headings for paragraphs **B-H** from the list of headings below.*

*Write the appropriate numbers (**i-x**) in boxes **27-33** on your answer sheet.*

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

List of Headings

i Common objections

ii Who's planning what

iii This type sells best in the shops

iv The figures say it all

v Early trials

vi They can't get in without these

vii How does it work?

viii Fighting fraud

ix Systems to avoid

x Accepting the inevitable

Example	**Answer**
Paragraph A	vi

27 Paragraph **B**

28 Paragraph **C**

29 Paragraph **D**

30 Paragraph **E**

31 Paragraph **F**

32 Paragraph **G**

33 Paragraph **H**

THE KEYLESS SOCIETY

A Students who want to enter the University of Montreal's Athletic Complex need more than just a conventional ID card - their identities must be authenticated by an electronic hand scanner. In some California housing estates, a key alone is insufficient to get someone in the door; his or her /Voiceprinfmust also be verified. And soon, customers at some Japanese banks will have to present their faces for scanning before they can enter the building and withdraw their money.

B All of these are applications of biometrics, a little-known but fast-growing technology that involves the use of physical or biological characteristics to identify individuals. In use for more than a decade at some highsecurity government institutions in the United States and Canada, biometrics are now rapidly popping up in the everyctay world. Already, more than 10,000 facilities, from prisons to day-care centres, monitor people's fingerprints or other physical parts to ensure that they are who they claim to be. Some 60 biometric companies around the world pulled in at least $22 million last year and that grand total is expected to mushroom to at least $50 million by 1999.

C Biometric security systems operate by storing a digitised record of some unique human feature. When an authorised user wishes to enter or use the facility, the system scans the person's corresponding characteristics and attempts to match them against those on record. Systems using fingerprints, hands, voices, irises, retinas and faces are already on the market. Others using typing patterns and even body odours are in various stages of development.

D Fingerprint scanners are currently the most widely deployed type of biometric application, thanks to their growing use over the last 20 years by law-enforcement agencies. Sixteen American states now use biometric fingerprint verification systems to check that people claiming welfare payments are genuine. In June, politicians in Toronto voted to do the same, with a pilot project beginning next year.

E To date, the most widely used commercial biometric system is the handkey, a type of hand scanner which reads the unique shape, size and irregularities of people's hands. Originally developed for nuclear power plants, the handkey received its big break when it was used to control access to the Olympic Village in Atlanta by more than 65,000 athletes, trainers and support staff. Now there are scores of other applications.

F Around the world, the market is growing rapidly. Malaysia, for example, is preparing to equip all of its airports with biometric face scanners to match passengers with luggage. And Japan's largest maker of cash dispensers

is developing new machines that incorporate iris scanner~. The first commercial biometric, a hand reader used by an American firm to monitor employee attendance, was introduced in 1974. But only in the past few years has the technology improved enough for the prices to drop sufficiently to make them commercially viable. 'When we started four years ago, I had to explain to everyone what a biometric is,' says one marketing expert. 'Now, there's much more awareness out there.'

G Not surprisingly, biometrics raise thorny questions about privacy and the potential for abuse. Some worry that governments and industry will be tempted to use the technology to monitor individual behaviour . 'If someone used your fingerprints to match your health-insurance records with a credit-card record showing you regularly bought lots of cigarettes and fatty foods,' says one policy analyst, 'you would see your insurance payments go through the roof.' In Toronto, critics of the welfare fingerprint plan complained that it would stigmatise recipients by forcing them to submit to a procedure widely identified with criminals.

H Nonetheless, support for biometrics is growing in Toronto as it is in many other communities. In an increasingly crowded and complicated world, biometrics may well be a technology whose time has come.

Questions 34-40

*Look at the following groups of people (Questions **34-40**) and the list of blol]1etric systems (**A-F**) below.*
Match the groups of people to the biometric system associated with them in Reading Passage 3.
*Write the appropriate letters **A-F** in boxes **34-40** on your answer sheet.*

NB You may use any biometric system more than once.

34 sports students

35 Olympic athletes

36 airline passengers

37 welfare claimants

38 business employees

39 home owners

40 bank customers

Answer:

27 IV

28 vii

29 Vlll

30 III

31 11

32 i

33 x

34 B

35 B

36 E

37 A

38 B

39 D

40 E

IELTS Academic Reading Sample 112 - Sticking power

Sticking power

Want to walk on the ceiling?

All it takes is a bit of fancy footwork

A If Keilar Autumn, an expert in Biomechanik at Clark College in Portland, Oregon, has his way, the first footprints on Mars won't be human. They'll belong to a gecko. Gecko toes have legendary sticking power - and the Clark College scientist would like to see the next generation of Martian robots walking about on gecko-style feet. A gecko can whiz up the smoothest wall and hang from the ceiling by one foot, with no fear of falling.

B Autumn is one of a long line of researchers who have puzzled over the gecko's gravity-defying footwork. Earlier this year, he and his colleagues discovered that the gecko's toes don't just stick, they bond to the surface beneath them. Engineers are already trying to copy the gecko's technique - but reptilian feet are not the only ones they are interested in.

C Some of the most persistent 'hanging' creatures are insects. They can defy not just gravity, but gusts of wind, raindrops and a predator's attempt to prize them loose. Recent discoveries about how they achieve this could lead to the development of quick-release adhesives and miniature grippers, ideal for manipulating microscopic components or holding tiny bits of tissue together during surgery. 'There are lots of ways to make two surfaces stick together, but there are very few which provide precise and reversible attachment,' says Stas Gorb, a biologist in Tübingen, Germany, working on the problem.

D Geckos and insects have both perfected ways of doing this, and engineers and scientists would dearly love to know how. Friction certainly plays a part in assisting horizontal movement, but when the animal is running up a slope, climbing vertically or travelling upside down, it needs a more powerful adhesive. Just what that adhesive is has been hotly debated for years. Some people suggested that insects had micro-suckers. Some reckoned they relied on electrostatic forces. Others thought that intermolecular forces between pad and leaf might provide a firm foothold.

E Most of the evidence suggests that insects rely on 'wet adhesion', hanging on with the help of a thin film of fluid on the bottom of the pad. Insects often leave tiny trails of oily footprints. Some clearly secrete a fluid onto the 'soles' of their feet. And they tend to lose their footing when they have their feet cleaned or dried.

F This year, Walter Federle, an entomologist at the University of Würzburg, showed experimentally that an insect's sticking power depends on a thin film of liquid under its feet. He placed an ant on a polished turntable inside the rotor of a centrifuge, and switched it on. At slow speeds, the ant carried on walking unperturbed. But

as the scientist slowly increased the speed, the pulling forces grew stronger and the ant stopped dead, legs spread out and all six feet planted firmly on the ground. At higher speeds still, the ant's feet began to slide. 'This can only be explained by the presence of a liquid,' says Federle. 'If the ant relied on some form of dry adhesion, its feet would pop abruptly off the surface once the pull got too strong.'

G But the liquid isn't the whole story. What engineers really find exciting about insect feet is the way they make almost perfect contact with the surface beneath. 'Sticking to a perfectly smooth surface is no big deal,' says Gorb. But in nature, even the smoothest-looking surfaces have microscopic lumps and bumps. For a footpad to make good contact, it must follow the contours of the landscape beneath it. Flies, beetles and earwigs have solved the problem with hairy footpads, with hairs that bend like the bristles of a toothbrush to accommodate the troughs below.

H Gorb has tested dozens of species with this sort of pad to see which had the best stick. Flies resist a pull of three or four times their body weight - perfectly adequate for crossing the ceiling. But beetles can do better and the champion is a small, blue beetle with oversized yellow feet, found in the south-eastern parts of the US.

I Tom Eisner, a chemical ecologist at Cornell University in New York, has been fascinated by this beetle for years. Almost 30 years ago, he suggested that the beetle clung an tight to avoid being picked off by predators - ants in particular. When Eisher measured the beetle's sticking power earlier this year, he found that it can withstand pulling forces of around 80 times its own weight for about two minutes and an astonishing 200 times its own weight for shorter periods. 'The ants give up because the beetle holds on longer than they can be bothered to attack it,' he says.

J Whatever liquid insects rely on, the gecko seems able to manage without it. No one knows quite why the gecko needs so much sticking power. 'It seems overbuilt for the job,' says Autumn. But whatever the gecko's needs are, its skills are in demand by humans. Autumn and his colleagues in Oregon have already helped to create a robot that walks like a gecko. Mecho-Gecko, a robot built by iRobot of Massachusetts, walks like a lizard - rolling its toes down and peeling them up again. At the moment, though, it has to make do with balls of glue to give it stick. The next step is to try to reproduce the hairs on a gecko's toes and create a robot with the full set of gecko skills. Then we could build robots with feet that stick without glue, clean themselves and work just as well underwater as in the vacuum of space, or crawling over the dusty landscape of Mars.

Questions 14-18

*You should spend about 20 minutes on questions **1-13**, which are based on Reading Passage 2.*
*Look at the following statements (Questions **14-18**) and the list of scientists below.*

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

*Write the correct letter **A, B, C** or **D** in boxes **14-18** on your answer sheet.*

List of Scientists

A **Kellar Autumn**

B **Stas Gorb**

C **Walter Federte**

D **Tom Eisher**

14 Some insects use their ability to stick to surfaces as a way of defending themselves.

15 What makes sticky insect feet special is the fact that they can also detach themselves easily from a surface.

16 Gecko feet seem to be stickier than they need to be.

17 A robot with gecko-style feet would be ideal for exploring other planets.

18 Evidence shows that in order to stick, insect feet have to be wet.

Questions 19-22

Reading Passage 2 has ten paragraphs **A-J.**

Which paragraph contains the following information?

Write the correct letter **A-J** in boxes **19-22** on your answer sheet.

19 some of the practical things a gecko-style adhesive could be used for

20 a description of a test involving an insect in motion

21 three different theories scientists have had about how insect feet stick

22 examples of remarkable gecko movements

Questions 23-26

Complete each sentence with the correct ending **A-G** below.

Write the correct letter **A-G** in boxes **23-26** on your answer sheet.

A stick to surfaces in and out of water.

B curl up and down.

C are washed and dried.

D resist a pull of three times their body weight.

E start to slip across the surface.

F leave yellow footprints.

G have hairy footpads.

23 Insect feet lose their sticking power when they

24 If you put ants on a rapidly rotating object, their feet

25 Beetles can stick to uneven surfaces because they

26 The toes on robots like Mecho-Gecko

Answer:

14. D
15. B
16. A
17. A
18. C
19. C
20. F
21. D
22. A
23. C
24. E

25. G
26. B

IELTS Academic Reading Sample 110 - Making Every Drop Count

You should spend about **20** minutes on Questions **14-26**, which are based on Reading Passage 111 on the following pages.

Question 14-20

Reading Passage 65 has seven paragraphs, **A-H**

Choose the correct heading for paragraphs A and **C-H** from the list of headings below.

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

List of Headings

i Scientists' call for revision of policy

ii An explanation for reduced water use

iii How a global challenge was met

iv Irrigation systems fall into disuse

v Environmental effects

vi The financial cost of recent technological improvements

vii The relevance to health

viii Addressing the concern over increasing populations

ix A surprising downward trend in demand for water

x The need to raise standards

xi A description of ancient water supplies

14 Paragraph **A**

15 Paragraph **C**

16 Paragraph **D**

17 Paragraph **E**

18 Paragraph **F**

19 Paragraph **G**

20 Paragraph **H**

MAKING EVERY DROP COUNT

A

The history of human civilization is entwined with the history of ways we have learned to manipulate water resources. As towns gradually expanded, water was brought from increasingly remote sources, leading to sophisticated engineering efforts such as dams and aqueducts. At the height of the Roman Empire, nine major systems, with an innovative layout of pipes and well-built sewers, supplied the occupants of Rome with as

much water per person as is provided in many parts of the industrial world today.

B

During the industrial revolution and population explosion of the 19th and 20th centuries, the demand for water rose dramatically. Unprecedented construction of tens of thousands of monumental engineering projects designed to control floods, protect clean water supplies, and provide water for irrigation and hydropower brought great benefits to hundreds of millions of people. Food production has kept pace with soaring populations mainly because of the expansion of artificial irrigation system that make possible the growth of 40% of the world's food. Nearly one fifth of all the electricity generated worldwide is produced by turbines spun by the power of falling water.

C

Yet there is a dark side to this picture: despite our progress, half of the world's population till suffers, with water services inferior to those available to the ancient Greeks and Romans. As the United Nations report on access to water reiterated in November 2001, more than one billion people lack access to clean drinking water: some two and half billion do not have adequate sanitation services. Preventable water-related diseases kill an estimated 10,000 to 20,000 children every day, and the latest evidence suggests that we are falling behind in efforts to solve their problems.

D

The consequences of our water policies extend beyond jeopardizing human health. Tens of millions of people have been forced to move from their homes - often with little warning or compensation - to make way for the reservoirs behind dams. More than 20% of all freshwater fish species are now threatened or endangered because dams and water withdrawals have destroyed the free-flowing river ecosystems where they thrive. Certain irrigation practices degrade soil quality and reduce agricultural productivity. Groundwater aquifers* are being pumped down faster than they are naturally replenished in part of India, china, the USA and elsewhere. And disputes over shared water resources have led to violence and continue to raise local, national and even international tensions.

E

At the outset of the new millennium, however, the way resource planners think about water is beginning to change. The focus is slowly shifting back to the provision of basic human and environmental needs as top priority - ensuring 'some for all,' instead of 'more for some'. Some water experts are now demanding that existing infrastructure be used in smarter ways rather than building new facilities, which is increasingly considered the option of last, not first, resort. This shift in philosophy has not been universally accepted, and it comes with strong opposition from some established water organizations. Nevertheless, it may be the only way

to address successfully the pressing problems of providing everyone with clean water to drink, adequate water to grow food and a life free from preventable water-related illness.

F

Fortunately - and unexpectedly - the demand for water is not rising as rapidly as some predicted. As a result, the pressure to build now water infrastructures has diminished over the past two decades. Although population, industrial output and economic productivity have continued to soar in developed nations, the rate at which people withdraw water from aquifers, rivers and lacks has slowed. And in a few parts of the world, demand has actually fallen.

G

What explains this remarkable turn of events? Two factors: people have figured out how to use water more efficiently, and communities are rethinking their priorities for water use. Throughout the first three-quarters of the 20th century, the quantity of freshwater consumed per person doubled on average; in the USA, water withdrawals increased tenfold while the population quadrupled. But since 1980, the amount of water consumed per person has actually decreased, thanks to a range of new technologies that help to conserve water in homes and industry. In 1965, for instance, Japan used approximately 13 million gallons* of water to produce $1 million of commercial output; by 1989 this had dropped to 3.5 million gallons (even accounting for inflation) - almost a quadrupling of water productivity. In the USA, water withdrawals have fallen by more than 20% from their peak in 1980.

H

On the other hand, dams, aqueducts and other kinds of infrastructure will still have to be built, particularly in developing countries where basic human needs have not been met. But such projects must be built to higher specifications and with more accountability to local people and their environment then in the past. And even in regions where new projects seem warranted, we must find ways to meet demands with fewer resources, respecting ecological criteria and to smaller budget.

Question 21-26

Do the following statement agree with information given in Reading Passage 65:

*In boxes **21-26** 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

21 Water use per person is higher in the industrial world than it was in Ancient Rome.

22 Feeding increasing populations is possible due primarily to improved irrigation systems

23 Modern water systems imitate those of the ancient Greeks and Romans.

24 Industrial growth is increasing the overall demand for water.

25 Modern technologies have led to reduction in the domestic water consumption.

26 In the future, governments should maintain ownership of water infrastructures.

Answer:

14 xi

15 vii

16 v

17 i

18 ix

19 ii

20 x

21 NO

22 YES

23 NOT GIVEN

24 NO

25 YES

26 NOT GIVEN

IELTS Academic Reading Sample 108 - Educating Psyche

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

EDUCATING PSYCHE

Educating Psyche by Bernie Neville is a book which looks at radical new approaches to learning, describing the effects of emotion, imagination and the unconscious on learning. One the theory discussed in the book is that proposed by George Lozanov, which focuses on the power of suggestion.

Lozanov's instructional technique is based on the evidence that the connections made in the brain through unconscious processing (which he calls non-specific mental reactivity) are more durable than those mad through conscious processing. Besides the laboratory evidence for this, we know from our experience that we often remember what we have perceived peripherally, long after we have forgotten what we set out to learn if we think of a book we studied months or years ago, we will find it easier to recall peripheral details. The colour, the binding, the typeface, the table at the library where we sat while studying it than the content on which were concentrating If we think of a lecture we listened to with great concentration, we will recall the lecturer's appearance and mannerisms, our place in the auditorium, the failure of the air-conditioning, much more easily than the ideas we went to learn. Even if these peripheral details are a bit elusive, they come back readily in hypnosis or when we relive the event imaginatively, as in psychodrama. The details of the content of the lecture, on the other hand, seem to have gone forever.

This phenomenon can be partly attributed to the common counterproductive approach to study (making extreme efforts to memorize, tensing muscles, inducing fatigue), but it also simply reflects the way the brain functions. Lozanov therefore made indirect instruction (suggestion) central to his teaching system. In suggestopedia, as he called his method, consciousness is shifted away from the curriculum to focus on something peripheral. The curriculum then becomes peripheral and is delta with by the reserve capacity of the brain.

The suggestopedic approach to foreign language learning provides a good illustration. In its most recent variant (1980), it consists of the reading of vocabulary and text while the class is listening to music. The first session is in two parts. In the first part, the music is classical (Mozart, Beethoven, Brahms) and the teacher reads the text slowly and solemnly, with attention to the dynamics of the music. The students follow the text in their books. This is followed by several minutes of silence. In the second part, they listen to baroque music (Bach, Corelli, Handel) while the teacher reads the text in a normal speaking voice During this time they have their books closed During the whole of this session, their attention is passive;.. they listen to the music but make no attempt

to learn the material.

Beforehand, the students have been carefully prepared for the language learning experience. Through meeting with the staff and satisfied students they develop expectation that learning will be easy and pleasant and that they will successfully learn several hundred words of the foreign language during the class. In a preliminary talk, the teacher introduce them to the material to be covered, but does not 'teach' it. Likewise, the students are instructed not to try to learn it during this introduction.

Some hours after the two-part session, there is a follow-up class at which the students are stimulated to recall the material presented. Once again the approach is indirect. The students do not focus their attention on trying to remember the vocabulary, but focus on using the language to communicate (e.g. through games or improvised dramatizations). Such methods are not unusual in language teaching. What is distinctive in the suggestopedic method is that they are devoted entirely to assisting recall. The 'learning' of the material is assumed to be automatic and effortless, accomplished while listening to music. The teacher's task is to assist the students to apply what they have learned paraconsciously, and in doing so to make it easily accessible to consciousness. Another difference from conventional teaching is the evidence that students can regularly learn 1000 new words of foreign language during a suggestopedic session, as well as grammar and idiom.

Lozanov experimented with teaching by direct suggestion during sleep, hpynossis and trance stages, but found such procedure unnecessary. Hypnosis, yoga, Silva mind-control, religious ceremonies and faith healing are all associated with successful suggestion, but none of their techniques seem to be essential to it. Such rituals may be seen as placebos. Lozanov acknowledges that the ritual surrounding suggestion in his own system is also a placebo, but maintains that with such a placebo people are unable to or afraid to tap the reserve capacity of their brains. Like any placebo, it must be dispensed with authority to be effective. Just as a doctor calls on the full power of autocratic suggestion by insisting that patient take precisely this white capsule precisely three times a day before meals, Lozanov is categoric in insisting that suggestopedic session be conducted exactly in that manner designated, by trained and accredited suggestopedic teachers.

White suggestopedia has gained some notoriety through success in the teaching of modern languages, few teachers are able to emulate the spectacular results of Lozanov and his associates. We can, perhaps, attribute mediocre results to and inadequate placebo effect. The students have not developed the appropriate mind set. They are often not motivated to learn through this method. They do not have enough 'faith'. They do not see it as 'real teaching', especially as it does not seem to involve the 'work' they have learned to believe is essential to learning.

Questions 27-30

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

*Write the correct letter in boxes **27-30** on your answer sheet.*

27 The book Educating Psyche is mainly concerned with

A the power of suggestion in learninng

B a particular technique for leaning based on emotions.

C the effects of emotion on the imagination and the unconscious.

D ways of learning which are not traditonal.

28 Lozanov's theory claims that, then we try to remember things,

A unimportant details are the easiest to recall.

B concentrating hard produces the best results.

C the most significant facts are most easily recalled.

D peripheral vision is not important.

29 In this passage, the author uses the examples of a book and a lecture to illustrate that

A both these are important for developing concentration.

B his theory about methods of learning is valid.

C reading is a better technique for learning than listening.

D we can remember things more easily under hypnosis.

30 Lozanov claims that teachers should train students to

A memorise details of the curriculum.

B develop their own sets of indirect instructions.

C think about something other than the curriculum content.

D avoid overloading the capacity of the brain.

Questions 31-36

Do the following statement agree with the information given in Reading Passage?

In boxes **31-36** 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

31 In the example of suggestopedic teaching in the fourth paragraph, the only variable that chagnes is the music.

32 Prior to the suggestopedia class, students are made aware that the language experience will be demanding.

33 In the follow-up class, the teaching activities are similar to those used in conventional classes.

34 As an indirect benefit, students notice improvements in their memory.

35 Teachers say they prefer suggestopedia to traditional approaches to language teaching.

36 Students in a suggestopedia class retain more new vocabulary than those in ordinary classes.

Questions 37-40

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

Write the correct letter **A -K** in boxes **37-40** on your answer sheet.

Sugestopedia uses a less direct method of suggestion than other techniques such as hypnosis. However, Lozanov admits that a certain amount of **37.....**is necessary in order to convince students, even if this is just a **38 .....** Futhermore, if the method is to succeed, teachers must follow a set procedure. Although Lozanov's method has become quite **39 .....** , the result of most other teachers using this method have been **40**.....

A spectacular

B teaching

C lesson

D authoritarian

E unpopular

F ritual

G unspectacular

H placebo

I involved

J appropriate

K well known

Answer:

27 D

28 A

29 B

30 C

31 FALSE

32 FALSE

33 TRUE

34 NOT GIVEN

35 NOT GIVEN

36 TRUE

37 F

38 H

39 K

40 G