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**Academic**

**Reading**

**Practice Test**

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## Reading Passage 1

### Dyslexia

**Paragraph 1** People who left school unable to read were often dismissed as being lazy. Some probably were but many were simply unable to learn because they were dyslexic. Four key findings now suggest that dyslexia is an organic problem and not a motivational one. Firstly the brain anatomy of dyslexics differs slightly from those of non dyslexics. Secondly their brain functions as measured by electrical activity are dissimilar. Thirdly they have behavioral differences apart from an inability to read. Finally there is more and more evidence to suggest that their condition is linked to particular genes.

**Paragraph 2** The anatomical differences between the brains of dyslexics and non- dyslexics were first noticed in 1979 by Albert Galaburda of Harvard Medical School. He found two sorts of microscopic flaws in the language centres of dyslexic's brains. These are called ectoplasts and microgyria.

**Paragraph 3** The language centres form part of the cerebral cortex and are situated on the left side of the brain. The cortex consists of six layers of cells. An ectopia is a collection of nerve cells that push up from the lower layers of the cortex into the outer ones, where they are not normally found. A microgyrus is a small fold in the cortex which results in a reduction in the normal number of layers from six to four.

**Paragraph 4** The formation of microgyria causes confusion in the neural connections between the language centres and other parts of the brain. Microgyria have been induced in rat embryos and as adults these rats are found to have a reduced ability in distinguishing between two sounds played in quick succession. This inability to distinguish between two sounds in quick succession is also a symptom of dyslexia in people.

**Paragraph 5** Dyslexia not only affects language centres but also causes brain abnormalities in visual pathways as well. One such abnormality is the reduction in the cell size in the layers of the lateral geniculate nucleus. This is where the nerve tracts which transmit information from the eyes to the visual cortex at the back of the brain are found. This is significant as dyslexia is essentially an inability to deal with linguistic information in visual form.

**Paragraph 6** This parallel failure of visual and auditory systems is seen elsewhere in the brain. Guinevere Eden and Thomas Zeffiro, who work at Georgetown University in Washington D. C. have found an example of it using a brain scanning technique called functional magnetic resonance imaging.(MRI)

**Paragraph 7** A fundamental characteristic of dyslexia is difficulty in processing written phenomes. Phenomes are the units of sound which make up a language. By giving dyslexic people tasks such as removing phenomes from the beginning of words, while at the same time monitoring brain activity with their scanner, Dr Eden and Dr Zeffiro were able to stimulate both the visual and auditory pathways simultaneously. Their findings demonstrated that dyslexics showed low activity in a part of the brain called Brodmann's area 37, another part of the brain where visual and auditory information are handled in close proximity.

**Paragraph 8** Dr Eden and Dr Zeffiro have also compared the brain activity of dyslexic and non-dyslexic readers who were given a task not related to reading. Another symptom of dyslexia is difficulty in detecting visual motion. On this basis Dr Eden and Dr Zeffiro devised a task whereby people were asked to look at dots on a screen and identify which of them was moving and in which direction. While monitoring brain activity with the scanner, it was found that dyslexics performing this task showed significantly less brain activity in Brodmann's area 37 than non dyslexics. As this task did not require reading skills it could be used to test children for incipient dyslexia before they reach the reading age; then they could be given special tuition.

**Paragraph 9** To broaden their investigation, Dr Eden and Dr Zeffiro teamed up with Frank Wood and his colleagues at the Wake Forest University School of Medicine in North Carolina, an institution specializing in dyslexia. Dr Eden and Dr Zeffiro borrowed some of its patients and monitored them in the fMRI machine at Georgetown University. This was done both before and after the individuals had participated in an intensive programme designed to improve their reading. Non- dyslexics were also scanned and used as controls in the investigation.

**Paragraph 10** The results were significant. After the programme, the participants showed enhanced brain activity while reading. However this activity was not on the left side of the brain

but in areas on the right side, corresponding exactly to language centres in the opposite hemisphere. The reading programme had stimulated the brains of the participants to recruit batches of nerve cells in a place not normally associated with language processing.

**Paragraph 11** The primary cause for these problems is another of Dr Wood's interests. The abnormal brain tissue in dyslexia is developed by the fifth month of gestation, which indicates that the cause of the disorder must act before that time. This suggests that it may be genetic. Many people argue about the relative contributions of genes and the environment to human behaviour and human disease. Dyslexia is both behavioural and, to a certain degree, it is a disease. It appears to have a biological origin and genetic roots. Yet looking at it from a different angle its cause is almost purely environmental. People living in illiterate societies are hardly troubled by its other symptoms. It was the invention of writing that brought the difficulty to light, not the mutation of genes. Nature or environment? You will have to decide between the two.

#### **Questions 1-6**

Do the following statements agree with the views of the writer in reading passage

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

1. Dyslexia is probably caused by motivational problems.
2. Dyslexia affects language as well as visual and audio processes.
3. In modern society dyslexia is essentially the inability to distinguish between visual forms.
4. It has been demonstrated that special reading programmes can teach dyslexic people to read as well as non-dyslexic ones.
5. The cause of dyslexia is partly genetic and partly environmental.
6. The writer of the article believes that dyslexia can most effectively be cured in illiterate societies.

#### **Questions 7-11**

Match the items from the reading passage to the definitions. Choose the correct letters A B C D

7. Ectopia
  - A. a reduction in the number of layers in part of the cortex of the brain.
  - B. a collection of nerve cells in a part of the cortex of the brain where they are not normally found.
  - C. a formation of six layers in the cortex of the brain, where normally there are four.
  - D. an inability to deal with linguistic information in visual form.
8. Microgyria
  - A. a symptom of dyslexia.
  - B. abnormal pathways of visual information in the brain.
  - C. an abnormal formation of layers in the cortex of the brain.
  - D. confusion resulting in inability to distinguish sounds in quick succession.
9. Phenomes
  - A. sounds made in quick succession.
  - B. part of language that dyslexics are unable to identify.
  - C. brain activity that can be monitored with special scanning techniques.
  - D. the units of sound which make up a language.
10. fMRI
  - A. a scientific equipment for assessing reading skills.
  - B. a technique for scanning activity of the brain.
  - C. a technique for stimulating visual and auditory pathways in the brain.
  - D. a machine to stimulate visual motion.
11. Brodmann's area 37
  - A. a less active part of the brain.
  - B. an abnormal formation in the brain of dyslexics.
  - C. where all visual information is handled in the brain.
  - D. part of the brain where visual and auditory information are handled.

#### **Questions 12-14**

Complete the sentences below with words taken from the reading passage. Use *no more than three words* for each answer

12. In the language centres of dyslexics brains, Dr Albert Galaburda discovered two sorts of -----
13. One abnormality in the dyslexics brains is the reduction in the cell size in the layers of the ----
14. Dyslexia is behavioural problem and also a -----

## READING PASSAGE 2

### The Oscars

**Paragraph 1** Once every year, the red carpet is rolled out and the stars begin to arrive in their limousines, dressed in their finest clothes, decked with jewels borrowed from some of the most exclusive shops in town and worth hundreds and thousands of dollars. It's the annual awards ceremony of the Academy of Motion Pictures Arts and Scientists, more commonly known as "the Oscars". For 75 years now, Hollywood has acknowledged the best actors, actresses, directors and writers with these awards, as well as others working behind the scenes in these movies.

**Paragraph 2** The first Academy Awards were presented in 1927, although there was no ceremony that year. The first awards ceremony took place in 1929, a ceremony that differed in many ways from the ones we see today. In early ceremonies, a banquet was held for all participants and tickets cost only \$10. There were only 12 categories for prizes, today there are over 35. In those early years few movies had soundtracks – the movies were just becoming the talkies. But perhaps the biggest difference between the first ceremony and the ceremonies of today is that the winners of the awards were announced in advance of the ceremony – there was no element of surprise at all. It was not until 1941 that the "sealed envelope" was introduced, with all the drama and suspense that it entails. Today, the phrase "the envelope please" has become symbolic of all the tension and spectacle of the Oscars.

**Paragraph 3** Today, over 70 million people view the Oscars ceremony each year, making it one of the most viewed programmes on TV. The ceremony appeared on television for the first time in 1953 and 1966 was the first time it was seen in colour. An enormous amount of work goes into the preparation of this, Hollywood's most important event, and perhaps for this reason, the ceremony has never been cancelled – though it has been postponed three times. Once the Oscars were postponed for floods (1938), and twice they've been postponed due to assassinations or attempted assassinations (1968, 1981)

**Paragraph 4** So, who have the big winners been? The most famous "best picture" is probably *Ben Hur*, which won 11 Academy Awards in 1959. The only other picture to win this many Oscars was *Titanic* in 2000. The two films have something else in common: they were both "big budget" movies, considered outrageously extravagant by many commentators. In fact the expression "bigger than Ben Hur" has passed into everyday English, to describe something huge, with no expense spared. *Titanic* was made with a record budget of US\$200 million, though it still made a handsome profit at the box office. Another big winner was the film *Gone with the Wind*, which won 8 awards in 1939. This was one of the longest movies (3 ½ hours) to win, and is still considered a film classic.

**Paragraph 5** The winner of the Best Actress Award for *Gone with the Wind* was Vivien Leigh, a newcomer to the screen. She also won the Best Actress Award in 1951 for another film – *A Streetcar Named Desire*, the only other film for which she was nominated. Each year five actors and five actresses are nominated for the Best Actor Award and the Best Actress Awards and this in itself is a great honour. The actress to receive the most nominations is Meryl Streep, who has been nominated for 13 awards – and won two.. Katherine Hepburn however is the actress to have won the most awards – she won four Best Actress awards in her lifetime.

**Paragraph 6** Jack Nicholson is the only actor to win three Best Actor Awards, though Tom Hanks, Dustin Hoffman and Robert De Niro have all won two. Of these four actors, all but De Niro seem to bear out the theory that an actor's chance of winning a Best Actor, or Best Supporting Actor award, is greater if he is portraying a physically or mentally handicapped person. And if the character dies during the movie, this seems to help as well.

**Paragraph 7** In fact, there are many factors that can influence the awarding of prizes for actors and actresses, factors that may have little to do with their performance in a particular film. Sometimes awards are given to an actor or actress for a film that is not particularly outstanding, in order to honour a lifetime's work in the movie industry. This is considered the case, for example, for Paul Newman's win for his role in *The Colour of Money* (1986). And on other occasions, an award may be given in an attempt to "rectify past injustices" when it is felt that an actor or actress should have won an award for a previous movie. For example, a 76 year old Henry Fonda won an award for his performance in 1981's *On Golden Pond*, which many felt he had deserved years earlier for his role in *The Grapes of Wrath* (1940). Another factor which may influence the choice of the Academy is "the sympathy vote", such as Elizabeth Taylor's winning of the Best Actress award in 1960 for *Butterfield 8* – just after an almost fatal case of pneumonia.

**Paragraph 8** Whatever the reason for awarding those elusive gold figures, their power in enhancing career opportunities in the business is unquestionable, as is the continued spell they hold over the public.

#### **Questions 15-21**

Match the actor or actress in the left column with the reason they are mentioned in the text (A-F)

#### **Actor or Actress**

15. Elizabeth Taylor
16. Meryl Streep
17. Henry Fonda
18. Paul Newman
19. Jack Nicholson
20. Katherine Hepburn
21. Vivien Leigh

- A. has won the maximum awards in the Best Actor/Best Actress category
- B. received the award due to sympathy vote
- C. received an award for recognition of past work
- D. received an award to make up for being overlooked in the past.
- E. Has received the greatest number of nominations as Best Actor/Actress
- F. None of these reasons

#### **Questions 22-26**

Do the following statements agree with the views of the writer in reading passage 2? Write

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

22. Robert De Niro did not play a handicapped person in his award winning films.
23. Tom Cruise is one actor who, despite many outstanding performances, has never received a Best Actor award.
24. The Oscars have never been cancelled.
25. The Oscar ceremony today includes a dinner for all participants.
26. More money was spent on Titanic than any other movie.

### Reading Passage 3

## Electric Dreams

*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 by-product, 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 cell-powered A-class Mercedes-Benz compact car, known as Necar 4. Daimler Chrysler, as the merged Daimler-Benz and Chrysler 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 Chrysler's fuel cell development team.

#### Questions 27-34

There are 8 paragraphs numbered A-H in Reading Passage 3. 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.

- |       |   |
|-------|---|
| 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                         |

28. Paragraph B  
29. Paragraph C  
30. Paragraph D  
31. Paragraph E  
32. Paragraph F  
33. Paragraph G  
34. Paragraph H

#### Questions 35-37

Choose the most appropriate letter A B C or D

35. 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
36. 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
37. 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 38-40

Complete the sentences below by taking words from the passage. Use NO MORE THAN THREE WORDS

38. The key step in the development of fuel cell occurred completely -----  
39. Ballard decided that the fuel cell could be used to reduce ----- in large cities.  
40. In an attempt to produce a more ecological car, Ballard ----- with a major automobile corporation.