



5- The nurse denied the charge that the patient's death was due to her negligence. She was sure that she was not responsible for the problem.

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|----------------|------------------|
| a. intimately | b. superficially |
| c. hazardously | d. vigorously |

6- Owing to the extremely complex psychological experiences, the attempt to the cost of psychological disorders such as depression is not easy.

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|---------------|--------------|
| a. circulate | b. alleviate |
| c. potentiate | d. replicate |

7- The illness may unfortunately his ability to think and concentrate.

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|-----------|--------------|
| a. impair | b. reinforce |
| c. reveal | d. impart |

8- One needs to exercise regularly to the harmful effects of sweet and fatty foods.

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|---------------|-------------|
| a. counteract | b. permeate |
| c. exacerbate | d. augment |

9- The manager's encouragement gave fresh to the employees to work more efficiently.

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| a. insult | b. impetus |
| c. imprint | d. immersion |

10- The president of the organization found it difficult to the decision made by the committee, so he rejected it.

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|--------------|------------|
| a. neglect | b. justify |
| c. eradicate | d. degrade |

11- The excess energy produced in the body after a period of eating heavy meals will be unless exercise is done to use it up.

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|--------------|---------------|
| a. depleted | b. eliminated |
| c. conserved | d. declined |

Part two: Reading Comprehension

Passage 1

Scientists believe that they have made a major breakthrough in fighting HIV-they have shown what happens when an infection-fighting antibody attacks a gap in HIV's considerable defenses.

Finding a vaccine against HIV has been very difficult because the proteins on the surface of the virus are continually mutating, but they have shown an antibody, called b12, attacking a weak spot of the virus where the protein is unstable. The virus is able to mutate rapidly to avoid detection by the immune system, and is also covered in sugary molecules which block access by antibodies.

However, certain parts of the virus must remain relatively unchanged so that it can catch hold of and enter human cells. One protein that sticks out from the surface of the virus and binds to receptors on host cells is one such region, which makes it a target for vaccine development.

Previous analyses of the blood of people that have been able to keep HIV from developing into AIDS for long periods of time have revealed a rare group of antibodies-including b-12 that seem to fight HIV with some degree of success. The latest study showed how the antibody and the protein interact.

16- According to the passage, the potential weak point of HIV's defense system is related to its

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|-----------------------|------------------------|
| a. cell receptors | b. constant mutation |
| c. unaltered portions | d. detection avoidance |

17- HIV takes advantage of to stay safe from the immune system.

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|--------------------|---------------------|
| a. defense gaps | b. cell receptors |
| c. rare antibodies | d. sugary molecules |

18- According to the author, HIV's defense system is

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|----------------------|-------------------------|
| a. very complicated | b. protein resistant |
| c. highly vulnerable | d. continually mutating |

19- Studies have shown that b12 attacks HIV on some of its

- a. access blocking proteins
b. highly mutating surface proteins

- c. outermost proteins aiming at target cells
- d. innermost proteins interacting with sugary molecules

22- The writer is excessively concerned about in academic settings.

- a. lack of sufficient research
- b. easygoing attitudes adopted
- c. tough RAE discipline implemented
- d. high efficiency which might be achieved

23- The last paragraph deals mostly with

- a. shortages academic institutions are suffering from
- b. problems which may arise due to the application of RAE
- c. the quality research management needs to meet RAE criteria
- d. the strategies the individual researchers should adopt to achieve perfection

24- It is implied that the RAE criteria are

- a. easy to achieve
- b. very rigid
- c. well-defined
- d. quite democratic

25- The author is apparently the Research Assessment Exercise (RAE).

- a. biased toward
- b. indifferent to
- c. in favor of
- d. critical of

26- To achieve the perfection established by RAE, academic institutions

- a. require a large amount of money
- b. might encounter some threats
- c. should carry out their work as before
- d. have to undergo dramatic educational changes

Passage 3

A study on a handful of people with suspected mild Alzheimer's disease (AD) suggests that a device that sends continuous electrical impulses to specific "memory" regions of the brain appears to increase neuronal activity. Results of the study using deep brain stimulation, a therapy already used in some patients with Parkinson's disease and depression, may offer hope for some with AD, an intractable disease with no cure.

AD is a progressive and lethal dementia that mostly strikes the elderly. It affects memory, thinking and behavior. Estimates vary, but experts suggest that as many as 1.5 million Americans may have AD. Smith says decades of research have yet to lead to clear understanding of its causes or to successful treatments that stop progression.

Deep brain stimulation (DBS) requires surgical implantation of a brain pacemaker, which sends electrical impulses to specific parts of the brain. For the study, surgeons implanted a tiny electrode able to deliver a low-grade electrical pulse close to the fornix, a key nerve tract in brain memory circuits.

27- Alzheimer's disease

- a. can be treated provided that it is mild
- b. is expected to worsen in the course of time
- c. has so far afflicted a handful of people
- d. resembles the Parkinson's altogether

28- As a treatment, deep stimulation of the brain

- a. was initially used for Alzheimer's sufferers
- b. turned Alzheimer's to a curable disease
- c. was already practiced with certain other diseases
- d. eradicated the brain's negative neural activities

29- The treatment targeting Alzheimer's so far

- a. remains to be well settled
- b. substitutes Parkinson's remedy
- c. is rather conclusive
- d. is quite optimal

30- The researchers are

- a. far from understanding what underpins Alzheimer's
- b. still looking for a device stimulating the brain
- c. estimating the exact number of Alzheimer's sufferers in the world
- d. making progress toward what strikes the elderly

31- To stimulate the brain, surgeons

- a. should distract the key nerve in the brain
- b. send intensive impulses to the brain
- c. should highlight the brain's memory capacity
- d. set the brain pacemaker near the fornix

Passage 4

Evolution of cells is closely linked to the evolution of life. Evolution of life was probably preceded by a chemical evolution. It seems that about 4 billion years ago conditions on earth favored the formation of a few simple carbohydrates, amino acids and nitrogenous bases from the atmospheric gases. The packaging of these compounds in a membrane resulted in the formation of primitive cells. These cells somehow "learnt" to oxidize their contents to release energy, and replenished their contents from the surroundings. But gradual depletion of ready-made compounds in the environment compelled the evolution of mechanisms to synthesize at least carbohydrates from the atmospheric carbon dioxide. The crucial step which gave "life" to these **chemical factories** was the evolution of mechanisms for self-replication accompanied by information transfer. Once the cell could divide, and pass on information so that products of the division would also behave like the parent, the basic features of life had been achieved.

32- The passage aims at describing the

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|---------------------------|-------------------------------------|
| a. origin of cell | b. history of evolution |
| c. evolution of organisms | d. events of four billion years ago |

33- About 4 billion years ago, a chemical evolution the formation of cells.

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|--------------------|------------------|
| a. resulted from | b. led to |
| c. was preceded by | d. followed from |

34- A decrease in the combining elements of cells the synthesis of carbohydrates from CO₂ in the atmosphere.

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|--------------|--------------|
| a. postponed | b. depleted |
| c. prompted | d. converted |

35- Chemical factories (line 10) was mentioned to refer to the

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|------------------|----------------|
| a. carbohydrates | b. amino acids |
| c. compounds | d. mechanisms |

36- The last sentence implies that life began

- a. when most cells achieved some common features
- b. once the cells were able to divide themselves
- c. as cells learned to like parents
- d. after cell division and information transfer occurred

Passage 5

A single genetic mutation seems to cause the abnormal facial features and other defects in the heart, bone, blood and reproductive cells, which come along with Hamamy syndrome, a rare disorder, whose exact cause was unknown until researchers pinpointed the genetic problem, in their recent paper, that produces the disease to be a mutation in a single gene called IRX5.

The work lends new insights into common ailments such as heart disease, osteoporosis, blood disorders and possibly sterility, "The findings provide a framework for understanding fascinating evolutionary questions, such as why humans of different ethnicities have distinct facial features and how these are embedded in our genome. IRX genes have been repeatedly co-opted during evolution, and small variation in their activity could underlie fine alterations in the way we look, or perhaps even drastic ones such as the traits seen in an elephant, whale, turtle or frog body pattern," Reversade said.

Rare genetic diseases, usually caused by mutations in a single gene, provide a unique opportunity to better understand more common disease processes. These "natural" experiments are similar to carefully controlled lab experiments in which the function of single genes are analyzed and often give major insights into general health issues. "This discovery of the causative gene is a significant finding that will catalyze research efforts into the role of the IRX gene family and greatly increase our understanding of bone homeostasis, or gamete formation, and so forth."

37- It is said that Hamamy syndrome is throughout the world.

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|---------------|--------------|
| a. uncommon | b. incurable |
| c. contagious | d. prevalent |

38- The discovery in question is said to open up new therapeutic solutions to

- a. some rare and complicated types of cancer
- b. a small number of patients worldwide
- c. some diseases affecting millions of people
- d. many afflicted with sexually transmitted diseases

