Reading 81

Прочитайте текст и выполните задания.

MUSIC OF THE SPHERES

The root of all knowledge

MUSIC, with its power to move and soothe, has long been recognised as a measure of civilisation. Indeed, for many previous cultures, such as the ancient Greeks, mathematics, astronomy and philosophy were all interconnected, seen as different aspects of the same knowledge. Every physical phenomenon, the Greeks believed, could be explained in terms of musical laws. Then this view of the world changed. Science and music **were hived off** into separate disciplines, the latter becoming part of the canon of "artistic" thought. Now, the process may **be about to turn full circle**. Scientists are re-discovering the fundamental importance of music to the human mind, building a bridge between disciplines.

(Para. A) The contemporary meeting place for music and science is in the area of brain mapping - and, in particular, the findings of modern neuro-psychiatrists about the physical basis of our musical perception. Though the scientific language is entirely new, many of the questions being asked are as old as human thought itself. What is music? Why do we have it? Is music a language? If so, what does is communicate? Why does music move us? Many of the answers lie in the ***inextricable*** connections between the evolution and anatomy of our brains and our fundamental musical responses. Our musical language is, it seems, a product of our neurology.

Each side of the brain has its own sphere of influence

To consider music as a language, we must understand the functions of the brain hemispheres. Research has shown that the left half of the brain is dominant in right-handed people and devoted to sequential, logical thinking - verbal language. The right hemisphere views the world spatially and emotionally. Though it has virtually no verbal ability, it is highly musical. Most importantly, it ***invests*** our perceptions with meaning. (In left-handed individuals, the right hemisphere is dominant.)

(Para. B) Patients who have had the right hemisphere of their brain removed seem to inhabit a literal, cold, emotionless world - yet their ability to use words and think logically is unimpaired. A classic illustration is of a patient who had only the left brain. “How are you feeling this morning?” - and in the typical, ***jerky*** monotonous voice of such a half-brained individual, he answered, Dalek-like: “With . my . hands.”

(Para. C) It is broadly accepted that, for the right-handed, music is largely a right-hemisphere function. So, what remains for an individual who suffers ***gross*** left-brain damage? The case of Stephen Wale illustrates this. Until about three years ago, he was a multilingual international telephonist and amateur composer. Then he suffered a massive stroke in the left hemisphere of his brain, which left him wheelchair-bound and unable to use the right side of his body. Because the left hemisphere of the brain is so involved in speech and verbal language, Steve's stroke left him **bereft of words**. His short-term memory is also severely ***impaired***. Questions cannot be framed as choices - “Tea or coffee?” - because he cannot ***retain*** more than one item at a time in his mind. Stephen cannot speak, only nod or shake his head, yet he is able to use his left hand and play a keyboard fluently. Miraculously, he can pick up a pen and use it - not to write words (even his own name is impossible for him), but to write music as witty and energetic as ever.

(Para. D) For most cultures, music, science and healing were merely different aspect of the same art. Now, modern medicine is beginning to **embrace** a broader view of mind and body, and science is helping to rediscover the ***true potency*** of music. In Germany, Ralph Spintge has brought music and medicine together again. While most of us would accept that music might ease emotional pain, he is using it in a clinical setting with remarkable results. Dr Spintge heads a pain clinic and has now established a database on the effects of music with 90.000 patients. In between treatments, or when waiting, they can choose music which they think helps them; this is proving helpful and ***soothing*** to patients in an ***intimidating*** hospital environment. It also improves their quality and speed of recovery.

Music moves both body and mind

Musical pieces have also been specially composed to induce the optimum conditions, mentally and physically, for specific medical procedures. In painful operations, for example, 15 minutes of soothing music **lulls the patient into a sense of well-being** so that only 50 per cent of the recommended doses of sedatives and anaesthetics are needed. Indeed, some procedures are now undertaken without any anaesthetic at all, something previously unthinkable.

(Para. E) Dr Spintge believes the rhythmic components of the music are the most effective in his work. The pieces specially composed to create specific physiological

change in his patients lock into the innate neurophysiological and biological rhythms that underlie the vital functions of the body. Spintge agrees that part of the value of the music is that it distracts the mind and allows the patient to “escape” into some favourite situation. However, the potency of music to change the physiological state goes beyond distraction.

Task 1. Выберите пять предложений, наиболее точно передающих основное содержание пяти абзацев, обозначенных буквами A, B, C, D, E. Укажите номера выбранных вариантов в порядке их следования. Внимание: три варианта - лишние.

1) *European researchers lead the field.*
2) *A European clinic has gone back to the holistic ideas of earlier civilisation.*
3) *Brain surgery can remove a patient's ability to express their emotions.*
4) *Today, both scientists and musicians carry out research into the workings of the brain.*
5) *Some medical conditions have ‘inspired' their own musical accompaniment.*
6) *Sometimes musical ability remains, even when speech is lost.*
7) *There is been a marked influence of alternative medicine on how brain damage is treated today.*
8) *Massive strokes can leave patients impaired.*

Task 2. Определите, являются ли следующие высказывания истинными (1), ложными (2) или в тексте нет запрашиваемой информации (3).

a) *Music has a predominantly aesthetic value.*
b) *The ultimate biological role of music and its connection to brain disorders remain poorly understood.*
c) *There is a strong interdependence between speech and music.*
d) *Most of the research on the biological role of music is carried out on the other side of the Atlantic.*
e) *Any music can have a therapeutic effect on a patient.*

Task 3. Выберите точное объяснение следующих фраз, использованных в тексте.

a) It two things ‘**were hived off**', then they were 1) cut into pieces 2) sold 3) separated 4) distributed 5) isolated.
b) If something is ‘**about to turn full circle**', then it 1) makes a U-turn 2) ends where it began 3) goes the rounds 4) slightly changes along the way.
c) When a person is ‘**bereft of words'**, then they 1) are speechless with anger 2) have nothing to say 3) feel very sad 4) have lost their speech.

d) When somebody '**embraces**' something, then they 1) put their arms around 2) face 3) accept 4) understand 5) include it.

e) If '**music lulls the patient into a sense of well-being**', then it makes them 1) sleep 2) feel exhilarated 3) go numb 4) feel safe 5) feel calm.

Task 4. Подберите контекстуальные синонимы к следующим словам в тексте.

a) ***inextricable*** 1) intimate 2) loose 3) inseparable 4) related 5) tense

b) ***invest*** 1) reveal 2) spend a large amount of money 3) officially give power 4) make something seem to have a particular quality

c) ***jerky*** 1) rough 2) dull 3) smooth 4) quick 5) nervous

d) ***potency*** 1) weight 2) strength 3) affect 4) intensity 5) effect

e) ***intimidating*** 1) shabby 2) oppressive 3) unsettled 4) traumatised 5) fearful

Task 5. Подберите контекстуальные антонимы к следующим словам в тексте.

a) ***gross*** 1) pleasant 2) massive 3) slight 4) partial 5) net

b) ***impaired*** 1) damaged 2) strong 3) unbroken 4) whole

c) ***retain*** 1) abolish 2) lose 3) loosen 4) replace 5) give up

d) ***true*** 1) faulty 2) unreal 3) imaginary 4) false 5) wrong

e) ***soothing*** 1) sedative 2) refreshing 3) invigorating 4) agitating

Task 6. Определите происхождение следующих слов в тексте. Варианты могут повторяться.

1) Arabic 2) Greek 3) Latin 4) Yiddish 5) Anglo-Saxon

a) Hemisphere b) induce c) spatial d) sequential e) innate

Источник задания: Евразийская олимпиада школьников, финал 2014/15, 10–11 классы, вариант 1

Reading 81 — Keys

KEYS

Task 1
4 3 6 2 5

Task 2
2 3 2 2 2

Task 3
3 2 4 3 5

Task 4
4 1 5 2 3

Task 5
2 2 4 4 3

Task 6
2 3 3 3 3

EXPLANATIONS (TASKS 1, 2)

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Task 2 (1)

= both

Task 1 (4)

(Para. A) The contemporary meeting place for music and science is in the area of brain mapping - and, in particular, the findings of modern neuro-psychiatrists about the physical basis of our musical perception. Though the scientific language is entirely new, many of the questions being asked are as old as human thought itself. What is music? Why do we have it? Is music a language? If so, what does is communicate? Why does music move us? Many of the answers lie in the ***inextricable*** connections between the evolution and anatomy of our brains and our fundamental musical responses. Our musical language is, it seems, a product of our neurology.

Task 2 (2)

The paragraph doesn't say whether these answers have been revealed or not

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=surgery
Task 1 (3)
This paragraph illustrates that speech and music are independent - Task 2(3)
=speech is lost
Task 1(6)
=musical ability remains
Task 2(4) - Germany is "this" side of the Atlantic
= European
=earlier civilization
=holistic; treating the whole person
Task 1(2)
special types of music are needed
Task 2(5)

= "inspired" their musical accompaniment

Task 1 (5)

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