

Text 1

Human brain structure is composed of three main parts: the forebrain, midbrain and hindbrain, each with multiple parts.

The Cerebrum: Also known as the cerebral cortex, the cerebrum is the largest part of the human brain, and it is associated with higher brain function such as thought and action. Nerve cells make up the gray surface, which is a little thicker than our thumb. White nerve fibers beneath the surface carry signals between nerve cells in other parts of the brain and body. Its wrinkled surface increases the surface area, and is a six-layered structure found in mammals, called the neocortex. It is divided into four sections, called “lobes”. They are; the frontal lobe, the parietal lobe, the occipital lobe and the temporal lobe.

Frontal Lobe – The frontal lobe lies just beneath our forehead and is associated with our brain’s ability to reason, organize, plan, speak, move, make facial expressions, serial task, problem solve, control inhibition, spontaneity , initiate and self-regulate behaviors, pay attention, remember and control emotions.

Parietal Lobe – The parietal lobe is located at the upper rear of our brain, and controls our complex behaviors, including senses such as vision, touch, body awareness and spatial orientation. It plays important roles in integrating sensory information from various parts of our body , knowledge of numbers and their relations, and in the manipulation of objects. Portions are involved with our visuospatial processing, language comprehension, the ability to construct, body positioning and movement, neglect/inattention, left-right differentiation and self- awareness/insight.

Occipital Lobe – The occipital lobe is located at the back of our brain, and is associated with our visual processing, such as visual recognition, visual attention, spatial analysis (moving in a 3-D world) and visual perception of body language; such as postures, expressions and gestures.

Temporal Lobe – The temporal lobe is located near our ears, and is associated with processing our perception and recognition of auditory stimuli (including our ability to focus on one sound among many , like listening to one voice among many at a party), comprehending spoken language, verbal memory , visual memory and language production (including fluency and word- finding), general knowledge and autobiographical memories. A deep furrow divides the cerebrum into two halves, known as the left and right hemispheres. And, while the two hemispheres look almost symmetrical, each side seems to function differently . The right hemisphere is considered our creative side, and the left hemisphere is considered our logical side. A bundle of axons, called the corpus callosum, connects the two hemispheres.

1. What is the main idea of the passage?

- (A) The description of surface carry signals between nerve cells in other parts of the brain and body .
- (B) The explanation about A bundle of axons, called the corpus callosum, connects the two hemispheres.
- (C) The overview about the structure and function of the human brain.
- (D) The findings of the important roles of parietal lobe in integrating sensory information from various parts of our body.
- (E) The argument of the perception and recognition of auditory stimuli in human brain.

2. The sentence ‘The parietal lobe is located at the upper rear of our brain, and controls our complex behaviors, including senses such as vision, touch, body awareness and spatial orientation’ In paragraph 5 can best be restated as

- (A) The parietal lobe can be in at the upper rear of our brain, and controls our complex behaviours, excluding senses such as vision, touch, body awareness and spatial orientation.
- (B) The parietal lobe is located near the upper rear of our brain, and controls our complex behaviours, senses such as vision, touch, body awareness and spatial orientation.
- (C) The parietal lobe is located far from the upper rear of our brain, and controls our complex behaviours, a part of senses such as vision, touch, body awareness and spatial orientation.
- (D) The location of parietal lobe is at the upper rear of our brain, and controls our complex behaviours, that is, senses such as vision, touch, body awareness and spatial orientation.
- (E) The upper rear of our brain is at the parietal lob, and controls our complex behaviours, including senses such as vision, touch, body awareness and spatial orientation.

3. It can be concluded from the passage that

- (A) Three main parts of human brain, the forebrain, midbrain and hindbrain, each with multiple parts, have significant roles in controlling human activity.
- (B) The frontal lobe lies just beneath our forehead and is associated with our brain's ability to visual recognition, such as visual recognition, visual attention, spatial analysis.
- (C) The right hemisphere is considered our creative side, and the left hemisphere is considered human mental activity .
- (D) A deep furrow has functions to comprehend spoken language, verbal memory , visual memory and language production.
- (E) Frontal lobes are involved with our visuospatial processing, language comprehension, the ability to construct, body positioning and movement.

4. What most likely motivates the writer in writing the passage?

- (A) Not many people have much information about the functions of parts of human brain.
- (B) There is a mystery about what functions of human brain.
- (C) People's information about human brain is suffecient.
- (D) Many people have known about the functions of the brain.
- (E) The information about functions about human brain is not available.

Questions number 5 to 9 are based on the following text.

Hawaii's Kilauea volcano keeps erupting with syrupy lava flows, serving as a fiery reminder of nature's destructive power. There are two contents flow out as molten rock and they both have to do with volcanoes. But as the ongoing eruption captures headlines, a question might occur to the readers: What's the difference between magma and lava?

The distinction between magma and lava is all about location. When geologists refer to magma, they're talking about molten rock that's still trapped underground. If this molten rock makes it

to the surface and keeps flowing like a liquid, it's called lava. Lava is molten rock generated by geothermal energy and expelled through fractures in planetary crust or in an eruption, usually at temperatures from 700 to 1,200 °C (1,292 to 2,192 °F). The structures resulting from subsequent solidification and cooling are also sometimes described as lava. The molten rock is formed in the interior of some planets, including Earth, and some of their satellites, though such material located below the crust is referred to by other terms.

Magmas vary in their chemical composition, which gives them— and the volcanoes that contain them—different properties. Mafic magmas like those in Hawaii tend to form when the heavier crust that forms the ocean floor melts. They contain between 47 to 63 percent silica, the mineral that makes up glass and quartz. Silicic magmas, on the other hand, tend to form when the lighter continental crust melts. These magmas are more than 63 percent silica,

which makes them more viscous: At their runniest, silicic magmas flow about as well as lard or caulk—which is to say not well at all. They're also cooler than mafic magmas. Rhyolite, an especially silica-rich type of lava, hits temperatures between only 1,200 degrees to 1,500 degrees Fahrenheit.

When silicic magmas are no longer confined under sufficiently high pressure, the gases dissolved within them come out of solution and form bubbles. And just like opening a shaken-up can of soda, the resulting rush of vapor triggers an explosive eruption. Iconic cone-shaped volcanoes called stratovolcanoes, such as Mount Pinatubo, are loaded with silicic magmas. Hawaii's volcanoes, on the other hand, contain especially low-silica magmas made of basalt, which means they have much less explosive oomph. Instead, they ooze and spatter, creating shield volcanoes—gently sloped formations that have become the islands' signature geologic silhouette.

5. What is the appropriate title of the text above?

- (A) The Explosive power of a volcano
- (B) The Characteristic of Magma and Lava
- (C) The Distinction of Magma and Lava
- (D) The Pressure of Silicic Magmas as a Composition of a Volcano
- (E) The Composition of Magma and Lava Based on a Volcano

6. What is the motive of the writer to present the passage?

- (A) To raise people awareness about the danger of volcano eruption
- (B) To persuade the readers not to live nearby the area of volcano eruption
- (C) To describe the danger of volcano eruption through the composition of magmas
- (D) To straighten people's misconception about the difference of magma and lava
- (E) To expose people's lack of understanding about the terms of lava and magma

7. 'Magmas vary in their chemical composition,...'

The sentence can be best restated with...

- (A) the composition of magma can be differentiated through their chemical compound
- (B) the chemical structure of magma is different based on their composition
- (C) the component of magma is made of chemical element
- (D) the basic structure of magma can be seen from their chemical component
- (E) the nature of chemical composition is based on magma variation

8. What is the difference of volcanoes in Hawaii from that of Mount Pinatubo?

- (A) Mount Pinatubo is more destructive than Hawaii
- (B) Volcanoes in Hawaii are less explosive power than that of Pinatubo
- (C) Hawaii's volcanoes are highly explosive than those of Mount Pinatubo
- (D) Hawaii's volcanoes are loaded with silicic magmas.
- (E) Mount Pinatubo is the islands who has signature geologic silhouette

9. In which paragraph does the author elaborate what imposes low or high explosion of a volcano?

- (A) Paragraph 2
- (B) Paragraph 3
- (C) Paragraph 4
- (D) Paragraph 2 and 3
- (E) Paragraph 3 and 4

