

HESI A2 Reading Comprehension Practice Test

Section: HESI A2 Reading Exams • Total Questions: 10 • Format: Verified Q&A

1. In the context provided, what does the term 'evolved' mean?

Blood Pressure Regulators

The body comprises systems that have evolved and diversified to maintain essential functions and processes. One such system is the cardiovascular system, which includes critical regulators of blood pressure. The heart serves as the body's pump, ensuring a steady flow of vital oxygen to all cells while facilitating the removal of carbon dioxide and other waste products. Given that blood pressure varies at different points throughout the body, various components are necessary to regulate it effectively. Three primary components involved in blood pressure regulation are baroreceptors, chemoreceptors, and the kidneys. Baroreceptors, which are stretch receptors made up of fine branching nerve endings, are located along the walls of arteries near the heart and in other areas of the body. When these baroreceptors detect stretching in the arterial walls, they send impulses to the heart, arteries, and veins, leading to an increase or decrease in blood pressure. Chemoreceptors, found along the walls of the arteries, monitor changes in oxygen levels, carbon dioxide, and pH. For instance, a drop in oxygen levels triggers these receptors to send impulses that raise blood pressure. The kidneys also play a crucial role in blood pressure regulation by absorbing salts and water while eliminating waste. Hormones secreted by the adrenal cortex influence the kidneys to retain or excrete salt and water, thereby affecting blood volume and, consequently, blood pressure.

- (A) To spread
- (B) To gradually develop
- (C) To revolve
- (D) To shift

2. Which strategy is not suggested by the author to deal with phobias?

"Phobias - Don't be afraid."

Sounds simple, but for some people it's not. Having the normal reaction of being scared or frightened helps you to survive threats of all kinds, both physical and verbal. Most mild fears are outgrown during childhood; however, severe fears, called phobias, are extreme and unreasonable. Phobias cause out-of-control feelings such as sickness, headaches, ulcers, and high blood pressure. Specific phobias center around things, activities, or situations while people with social phobias feel anxiety over social settings where they fear embarrassing situations. Another type of phobia called panic disorder causes people to sweat, tremble, or even faint due to overwhelming panic which may occur at any time. By talking, breathing deeply, and visualizing, a person can gain control over debilitating phobias

- (A) Breathing deeply.
- (B) Talking.
- (C) Visualizing.
- (D) Taking medication.

3. According to the passage, what does the author imply about the effect of voice tones on public speaking?

What effect does your voice have on others? Does it persuade or irritate, attract or repel? One of the worst qualities is harshness. If you ever get the feeling that people are uncomfortable when you speak, it may be that your harsh tones are jarring their eardrums. Your voice will sound unpleasant if it is shrill, grating, hard, piercing, brassy, too loud, or too nasal. Harsh voice qualities usually come from too much tension in the throat and jaw. Tension tightens muscles and blocks the relaxed voice tones essential to a pleasing impression. Because tension occurs in higher pitched voices, women tend to have shriller voices than men, which usually makes them less desirable public speakers, newscasters, or political candidates.

- (A) Voice tones are crucial in making a positive impression on the audience.
- (B) Voice tones are irrelevant when delivering an engaging message.
- (C) Voice tones have no impact on public speaking success.
- (D) Voice tones are only important for women in public speaking careers.

4. What is the primary purpose of this passage?

Blood Pressure Regulators

The body is composed of systems that have evolved and diversified in order to maintain the natural functions and processes they regulate. One such system that has these regulators is the body's cardiovascular system. The body's pump, which regulates the flow of vitally needed oxygen to all cells of the body, as well as the discard of carbon dioxide and other waste products, is the heart.

Because blood pressure varies at different points within the body, differing components are needed to keep the body's blood pressure regulated. Three of the basic components are baroreceptors, chemoreceptors, and the kidneys.

Baroreceptors are stretch receptors composed of fine branching nerve endings and are contained along the walls of the arteries near the heart and in other areas of the body as well. Impulses are related to this stretching along the arterial walls, which causes these baroreceptors to send out even more impulses to the heart, arteries, and veins, causing the blood pressure to go either up or down.

Chemoreceptors are located along the walls of the arteries and monitor changes in oxygen level, carbon dioxide, and pH. Just think! A fall in oxygen causes receptors to send impulses to raise the blood pressure. The kidneys play a role in regulating blood pressure by absorbing salts and water and removing wastes. Hormones secreted by the adrenal cortex cause the kidney to keep or let go of any salt and water. This has an influence on blood volume and consequently on blood pressure.

- (A) To inform the reader about the dangers of high blood pressure
- (B) To inform the reader how high blood pressure leads to a higher risk of heart attack
- (C) To inform the reader how the cardiovascular system regulates blood pressure
- (D) To persuade the reader that controlling one's blood pressure is important

5. Which statement is a fact?

ELECTORAL COLLEGE

The Electoral College has nothing to do with college and contains no students. The Electoral College consists of votes that each state acquires based on the number of representatives it has in Congress. Each state has two electoral votes because each state has two senators. The remaining electoral votes are determined by the number of Congressmen, the number of which is based on the population of the state established by the Census taken each decade. During the presidential election, most states cast all their electoral votes for the candidate who wins the popular vote in that state. It's all very confusing, but the founding fathers know what they were doing. Downloaded by Abdul Hamid (a.ahamid2181@gmail.com) IOMoARcPSD|10672023 HESI A2 V2 Grammar, Vocab, Reading, & Math Questions with Answers). By having and using the Electoral College candidates' campaign in every state, but just because they win the popular vote across the country doesn't mean they will always win the election. Case in point, in election 2000, Al Gore won the popular vote across the country, but George W. Bush won more electoral votes. Therefore, he became our 43rd president.

- (A) Each state casts its electoral votes during the Presidential election.
- (B) Every state always votes for the same candidate in every election.
- (C) Electoral votes are only counted if a candidate has a majority in Congress.
- (D) States can choose not to participate in the Presidential election.

6. Which rainforest plant has more than one use?

About 6% of the earth is covered by rainforests. The largest rainforest in the world is the Amazon Basin, which stretches over 2.3 million square miles in nine different South American countries. This area is double the length of all the other remaining rainforests in the world. Brazil contains 60% of the Amazonian rainforest, since it lies at the mouth of the river Amazon. This river is the second largest in the world and contains more than one-fifth of the world's fresh water. The Amazon rainforest is a type of wet broadleaf forest. The weather there is very humid and warm as it rains quite a bit. Because of the high rainfall, the forest is very rich and green. The tree leaves are pointed and narrow so that the raindrops can easily drop off wet plants. This tropical rainforest has more living species than the entire European continent. There are over 400 types of insects living in one single rain forest tree for a total of 2.5 million species. One square kilometer of rainforest may contain over 75,000 types of trees and approximately 438,000 different kinds of plants, which comes to a total of 90,000 tons of greenery overall. The Amazon rainforest is home to 2,000 birds and mammals, with one in every five birds in the world living there. Local farmers have lived off this rich and diverse land for thousands of years. They have been able to find food and water here without destroying the land. The Kayapo people of Brazil farm in an environmentally-friendly way. Instead of chemicals, they use burned wood to enrich the soil, and plant banana trees, which attract wasps. These wasps then feed on leafcutter ants and get rid of these harmful insects. The rainforest also offers a lot of tropical fruits, such as bananas and coconuts, as food. Cinnamon is made from the bark of a rainforest tree. Amazonian Indians use the fruit and stem of the Buruti plant as a drink, to make bread and to build houses. Many other plants are used as medicine. But the Amazon rainforest is in very big danger of disappearing. 9,169 square miles of forest have been cut down in 2003 in Brazil alone. An area of the size of a football field is burned down basically every minute, which means that the rain forest may be gone by the year 2030. The dangers related to this type of activity are obvious. Trees take in poisonous carbon dioxide from the air and give off oxygen. There is more oxygen and less carbon dioxide around a rainforest. When trees are cut down, however, the amount of carbon dioxide increases, and the air gets warmer. This leads to global warming, which is extremely harmful to the environment. It is estimated that the burning of Brazilian rainforests alone produces 200 million metric tons of carbon dioxide a year. Another danger connected with destroying the rainforest is the disappearance of plants and animals. When trees are cut down, plants and animals have no more food left and slowly die out. Killing wild animals is illegal in Brazil, but there is plenty of stealing going on. 38 million animals are stolen and sold illegally each year. The most hunted animals are birds, especially parrots, followed by snakes and the jaguar.

- (A) Banana
- (B) Coconut
- (C) Cinnamon
- (D) Buriti plant

7. What statement is a fact stated in the article?

Glass

I wonder who first discovered glass. This commodity has been a part of civilization from the very beginning. Imagine a world without glass! How dark and dismal it would be. No windows, corrective lenses, telescopes, microscopes, cameras, sparkly drinking containers or mirrors. Life would not be the same without this wonderful discovery. Thank you, whoever found glass!

Glass is not an element, but a combination of several elements. It is a hard, brittle, transparent solid material composed mainly of silica, with additives to change the character of the glass. Common additives are soda, lime, lead, and boron. Each additive changes the properties of the final product. Soda and lime are the most common additives, accounting for about 90% of glass production. Adding lead increases reflectivity, causing the glass to "sparkle." The addition of boron changes the thermal and electrical properties of glass, allowing cookware that can be used in the oven without shattering.

- (A) Glass isn't an element, but a combination of several elements.
- (B) Glass is the most important material in modern technology.
- (C) Glass can only be used in decorative items.
- (D) Glass is naturally occurring and needs no processing.

8. What is a major difference in the way baroreceptors and chemoreceptors work from the way the kidneys work?

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- (A) Baroreceptors and chemoreceptors both work within the walls of the arteries, sending out impulses to raise or lower blood pressure, whereas the kidneys help control blood volume.
- (B) Baroreceptors and chemoreceptors both work to help maintain blood volume, whereas the kidneys take care of salts, water, and waste removal.
- (C) Baroreceptors and chemoreceptors must work together to control blood pressure, whereas the kidneys work with the adrenal cortex.
- (D) Baroreceptors and chemoreceptors are both located near the adrenal cortex, whereas the kidneys are located near the heart.

9. Which sound waves have a lower pitch?

Doppler Effect

Have you ever wondered why the whistle of a traveling, distant locomotive predicts its approach several yards before anyone actually sees it? Or why an oncoming ambulance's screaming siren is heard momentarily several feet before the ambulance comes into full view, before it passes you, and why its siren is still heard faintly well after the ambulance is out of sight?

What you are witnessing is a scientific phenomenon known as the Doppler Effect. What takes place is truly remarkable. In both of these instances, when the train or ambulance moves toward the sound waves in front of it, the sound waves are pulled closer together and have a higher frequency. In either instance, the listener positioned in front of the moving object hears a higher pitch. The ambulance and locomotive are progressively moving away from the sound waves behind them, causing the waves to be farther apart and to have a lower frequency. These fast-approaching modes of transportation distance themselves past the listener, who hears a lower pitch.

- (A) Sound waves that are closer together
- (B) Sound waves that are farther apart
- (C) Sound waves that travel a long distance
- (D) Sound waves that travel a short distance

10. What was the author's intention when writing this passage?

Have you ever found yourself staring at the ceiling at 2:00 a.m.? Have you kicked the blankets off to the floor from tossing and turning? Many longtime sufferers of Insomnia know these situations all too well. As many as 17% of Americans find the restful break of sleep hard to achieve.

Lack of sleep affects intellectual abilities at work or school by causing a deficit in memory, attention, and concentration which in turn creates a feeling of irritation or depression. Chronic insomnia can result from a medical illness, a psychiatric condition, or from sleep apnea, a condition where an individual actually stops breathing during sleep. Sleep hygiene, developing good sleep habits, and non-pharmacological therapies such as herbs and spices are some solutions to Insomnia.

- (A) Developing good sleep habits and using herbs and spices.
- (B) To explain insomnia and propose some solutions for the condition.
- (C) Watching television before bed.
- (D) Taking frequent naps during the day.