HESI Entrance Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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Questions



- 1. What is the classification picture of the nucleus and its chromosomes called?
 - A. Cytotype
 - **B.** Karyotype
 - C. Genotype
 - D. Phenotype
- 2. What does the term azoturia indicate in a medical context?
 - A. Elevated and excessive levels of nitrogen substrates and urea in the urine
 - B. Infection and inflammation of connective tissue
 - C. Scar formation
 - D. Discoloration of the skin
- 3. What is the term for turning outward?
 - A. Inversion
 - **B.** Eversion
 - C. Inferior
 - D. Compatible
- 4. What term refers to an examination of the gastrointestinal tract?
 - A. Endoscopy
 - **B.** Gastroenterology
 - C. Colonoscopy
 - D. Esophagogastroduodenoscopy
- 5. Which term refers to making a liquid less concentrated?
 - A. Concentrate
 - **B.** Dilute
 - C. Thicken
 - D. Ferment

- 6. Which term describes something that is pertaining to across or through the liver?
 - A. Subhepatic
 - B. Transhepatic
 - C. Abdominal
 - D. Anterior
- 7. Which term would you use to describe the fatty tissue in the body?
 - A. Adipose
 - B. Muscular
 - C. Connective
 - D. Epithelial
- 8. Which term describes something related to internal organs?
 - A. Visceral
 - **B.** Parietal
 - C. Peritoneal
 - D. Somatic
- 9. Which of the following represents an action of asserting oneself positively in communication?
 - A. Imply
 - **B.** Assertive
 - C. Infer
 - D. Eversion
- 10. What does "potential" refer to in a medical context?
 - A. Actual
 - B. Hypothetical
 - C. Likely to occur
 - D. Unlikely

Answers



- 1. B 2. A 3. B

- 3. B 4. A 5. B 6. B 7. A 8. A 9. B 10. C



Explanations



1. What is the classification picture of the nucleus and its chromosomes called?

- A. Cytotype
- **B.** Karyotype
- C. Genotype
- D. Phenotype

The classification picture of the nucleus and its chromosomes is called a karyotype. A karyotype is essentially a visual representation of an individual's complete set of chromosomes, organized in pairs and arranged by size, shape, and number. This arrangement helps in identifying chromosomal abnormalities that could lead to genetic disorders. A karyotype usually requires staining techniques that highlight structures on the chromosomes, allowing for detailed observation and analysis. This process is particularly useful in the fields of genetics and medicine, where it aids in diagnosing conditions such as Down syndrome, Turner syndrome, and others related to chromosomal number or structure. In contrast, cytotype refers to the classification of a cell's type, including its size, shape, and internal structures but does not specifically relate to chromosomes. Genotype describes the genetic makeup of an individual at the DNA level, while phenotype refers to the observable physical and physiological traits that result from the genotype and environmental influences. Therefore, karyotype is specific to chromosomes and their organization, making it the correct answer in this context.

2. What does the term azoturia indicate in a medical context?

- A. Elevated and excessive levels of nitrogen substrates and urea in the urine
- B. Infection and inflammation of connective tissue
- C. Scar formation
- D. Discoloration of the skin

Azoturia is a condition characterized by the presence of high levels of nitrogen-containing compounds, particularly urea, in the urine. This elevated concentration is often indicative of a metabolic disturbance, typically associated with renal function or dietary intake. In a medical context, the term specifically refers to the excretion of excessive nitrogenous waste products, which can signal various underlying health issues, such as kidney disease or dehydration. Understanding the term azoturia is important for diagnosing and managing conditions that affect waste removal and metabolic processes in the body. The correct interpretation enhances the ability to identify potential renal complications and manage treatment effectively, ensuring the preservation of kidney function and overall health.

3. What is the term for turning outward?

- A. Inversion
- **B.** Eversion
- C. Inferior
- D. Compatible

The term that describes turning outward is eversion. In the context of anatomy and movement, eversion specifically refers to the movement of certain body parts, particularly the foot, where the sole turns outward, away from the midline of the body. This motion is commonly discussed in relation to the ankle and foot, where eversion allows for adjustments in balance and adaption to uneven surfaces. Inversion, the option that describes the opposite of eversion, refers to turning the sole of the foot inward, towards the midline. Inferior is a term used to describe a position lower than another structure in anatomy, and compatible does not relate to anatomical movement at all. Understanding these terms is essential for discussing body movements clearly and accurately in fields such as physical therapy, anatomy classes, and sports sciences.

4. What term refers to an examination of the gastrointestinal tract?

- A. Endoscopy
- **B.** Gastroenterology
- C. Colonoscopy
- D. Esophagogastroduodenoscopy

The term that refers to an examination of the gastrointestinal tract is endoscopy. This is a broad term for a procedure that allows a doctor to visualize the inside of the gastrointestinal tract using a flexible tube equipped with a camera and light source. Endoscopy can be utilized to examine various parts of the gastrointestinal system, including the esophagus, stomach, and the intestines, by employing different types of scopes tailored for specific areas. While other terms, such as colonoscopy and esophagogastroduodenoscopy, refer to examinations of specific sections of the gastrointestinal tract, endoscopy encompasses all these procedures, making it the most comprehensive and correct choice for examining the entire gastrointestinal tract. Gastroenterology, on the other hand, is the field of medicine that focuses on the study and treatment of the digestive system and its disorders, rather than a specific examination technique.

5. Which term refers to making a liquid less concentrated?

- A. Concentrate
- **B.** Dilute
- C. Thicken
- D. Ferment

The term that refers to making a liquid less concentrated is dilute. In chemistry and everyday language, diluting a solution involves adding more solvent to the solution to reduce the concentration of solutes. This process decreases the ratio of solute to solvent, which can affect how the solution interacts with other substances, its color, taste, or any specific reactions it may be involved in. For example, when you add water to a fruit juice, you are diluting it; the juice becomes less intense in flavor and color. This term is widely used in various contexts, including cooking, chemistry, and pharmaceuticals, to indicate the decrease in concentration of a mixture or solution.

- 6. Which term describes something that is pertaining to across or through the liver?
 - A. Subhepatic
 - B. Transhepatic
 - C. Abdominal
 - D. Anterior

The term that describes something pertaining to across or through the liver is "Transhepatic." This term is derived from the prefix "trans-" which means "across" or "through," combined with "hepatic," which refers to the liver. Therefore, when used in a medical context, "transhepatic" often describes procedures, pathways, or conditions that involve passage across or through the liver. In contrast, the term "subhepatic" refers to something located beneath the liver, while "abdominal" describes something related to the abdomen in general, and "anterior" pertains to the front of the body. Each of these terms has distinct meanings that do not encapsulate the notion of traversing the liver itself. Thus, "Transhepatic" is the most accurate choice to represent this specific concept.

- 7. Which term would you use to describe the fatty tissue in the body?
 - A. Adipose
 - **B.** Muscular
 - C. Connective
 - D. Epithelial

The term used to describe fatty tissue in the body is "adipose." Adipose tissue is a specialized form of connective tissue that stores energy in the form of fat, serves as insulation to help regulate body temperature, and provides protection to organs. It consists of adipocytes, which are the cells that store fat, and plays an essential role in energy metabolism as well as hormone production. While there are other types of tissue in the body, "muscular" refers to tissue responsible for movement, "connective" is a broader term encompassing various tissues that support, bind, and protect other tissues and organs, and "epithelial" pertains to layers of cells that line surfaces and cavities. These terms describe different functions or characteristics in the body, but they do not specifically refer to fatty tissue as adipose does.

- 8. Which term describes something related to internal organs?
 - A. Visceral
 - **B.** Parietal
 - C. Peritoneal
 - **D. Somatic**

The term "visceral" refers specifically to anything related to the internal organs of the body, particularly those within the chest or abdomen. This includes organs such as the heart, lungs, liver, and intestines. In medical terminology, "visceral" is often used to describe pain or sensations that originate from these internal structures, as opposed to sensations that come from the skin, muscles, or joints. The other terms distinguish various anatomical or physiological concepts that do not pertain specifically to internal organs. For instance, "parietal" typically refers to the walls of a body cavity rather than the contents within, while "peritoneal" is specifically associated with the peritoneum, the membrane lining the abdominal cavity, rather than a broader reference to internal organs. "Somatic" pertains to the body, especially in relation to the skeletal muscles and skin, and is generally used to describe structures or functions under voluntary control.

- 9. Which of the following represents an action of asserting oneself positively in communication?
 - A. Imply
 - **B.** Assertive
 - C. Infer
 - D. Eversion

The action that represents asserting oneself positively in communication is best captured by the concept of being assertive. Assertive communication involves expressing one's thoughts, feelings, and beliefs in a clear and direct manner while respecting others. This means standing up for oneself without being aggressive or passive. Being assertive allows individuals to communicate their needs and rights confidently, which can lead to more effective interactions and healthier relationships. It encourages open dialogue and the expression of personal thoughts while also considering the perspectives and feelings of others. On the other hand, the other options do not encapsulate this quality. Implication relates to suggesting something without directly stating it, which does not assert one's position clearly. Inferring involves deducing information based on context or indirect clues, lacking a direct assertion of one's stance. Eversion, while a term in various contexts, particularly in biology, does not relate to the dynamics of communication. Thus, assertive is the term that accurately reflects the positive assertion of oneself in interaction.

10. What does "potential" refer to in a medical context?

- A. Actual
- B. Hypothetical
- C. Likely to occur
- D. Unlikely

In a medical context, the term "potential" typically refers to something that is likely to occur or has the capacity to occur under certain circumstances. For example, when discussing potential complications from a medical procedure, it refers to complications that could reasonably arise based on the nature of the procedure and the patient's condition. This understanding of "potential" encompasses the idea that certain conditions or events have a reasonable likelihood of manifesting, particularly when certain factors are present. Recognizing potential as something likely to occur helps medical professionals assess risks and prepare for possible outcomes, ensuring they can provide appropriate care and interventions when necessary. This interpretation aligns with the proactive and preventive nature of medical practice, emphasizing the importance of being prepared for both expected and unforeseen events.