HBS Pre-Assessment

|  |  |  |
| --- | --- | --- |
| Question | Answer | Level of Thinking |
| Which is the brain disorder in which a person loses neurons that release acetylcholine?

|  |  |
| --- | --- |
| 1. ALS (Lou Gehrig’s)
 | 1. Alzheimer’s
 |
| 1. Parkinson’s
 | 1. Epilepsy
 |

 |  | 2Compare,Cause & Effect |
| When terms biceps, triceps or quadriceps form part of a muscle’s name, you can assume that:

|  |
| --- |
| 1. the muscle has 2, 3, and 4 origins, respectively
 |
| 1. the muscle is able to change directions 2x, 3x, or 4x, respectively
 |
| 1. the muscle has 2, 3, or 4 functions, respectively
 |
| 1. the muscle has 2, 3, and 4 insertions, respectively
 |

 |  | 1Recall/Memorize |
| The cerebellum is:

|  |
| --- |
| 1. inferior to the occipital lobe
 |
| 1. posterior to the brain stem
 |
| 1. intermediate to the frontal lobe
 |
| 1. A and B
 |
| 1. A and C
 |

 |  | 2Compare/Relate |
| Billy goes in to see his family doctor because he is feeling tired and sluggish. His doctor does a blood glucose level test. His doctor discovers that his blood glucose levels are too low. The reason why is blood glucose levels are low is because Billy’s body is not producing enough

|  |  |
| --- | --- |
| 1. glucose
 | 1. glucagon
 |
| 1. insulin
 | 1. thyroxine
 |

 |  | 3AssessDraw conclusions |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the bending movement around a joint in a limb (as the knee or elbow) that decreases the angle between the bones of the limb at the joint.

|  |  |
| --- | --- |
| 1. extension
 | 1. hyperextension
 |
| 1. circumduction
 | 1. flexion
 |

 |  | 1Recall/Name |
| Which of the following bone features would be used to collect data for determining gender?

|  |
| --- |
| 1. shape of the orbital openings
 |
| 1. length of the phalanges
 |
| 1. sub-pubic angle
 |
| 1. prognathism
 |

 |  | 3Draw Conclusions/Investigate |
| Which region or part of the brain controls hunger, thirst & appetite?

|  |  |
| --- | --- |
| 1. frontal lobe
 | 1. cerebellum
 |
| 1. temporal lobe
 | 1. hypothalamus
 |

 |  | 1Memorize/Recall |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| A simple spinal reflex goes along which of the following reflex arcs?

|  |
| --- |
| 1. efferent neuron, interneuron, afferent neuron
 |
| 1. afferent neuron, efferent neuron, interneuron
 |
| 1. afferent neuron, interneuron, efferent neuron
 |
| 1. efferent neuron, afferent neuron, interneuron
 |

 |  | 2Relate/Cause & Effect |
| The part of the lung where gas exchange occurs is called:

|  |  |
| --- | --- |
| 1. alveoli
 | 1. bronchioles
 |
| 1. bronchi
 | 1. blood vessels
 |

 |  | 1Recall/Memorize |
| Which of the following statements is correct?

|  |
| --- |
| 1. reabsorption of water is hormonally controlled
 |
| 1. normal filtrate contains large amounts of protein
 |
| 1. most of the water passing through the kidneys is eliminated as urine
 |
| 1. the excretion of sodium ions is one of the mechanisms that maintains the pH balance in the blood
 |

 |  | 3Compare/Differentiate |
| RFLPs are:

|  |
| --- |
| 1. a degradative enzyme that recognizes specific nucleotide sequences and cuts up DNA
 |
| 1. differences in DNA sequences on homologous chromosomes that can result in different patterns of restriction fragment lengths
 |
| 1. measurements and analysis of unique physical or behavioral characteristics
 |
| 1. none of the answers are correct
 |

 |  | 2Interpret/Distinguish |

|  |  |  |
| --- | --- | --- |
| Steve’s friend throw a summer picnic to celebrate his 40th birthday. Steve spends the day playing touch football and chasing around after his kids. It’s almost 100°F outside and he is doing what he can to stay cool. Cold beer seems to work so he drinks many over the course of the day. Other than running to the bathroom all afternoon, Bill feels fine. Why does Steve have to run to the bathroom all afternoon?1. The alcohol increases the production of urine in the kidney.
2. The alcohol inhibits the release of ADH which causes the kidney to produce more urine.
3. The alcohol inhibits the release of aldosterone which causes the kidney to produce more urine.
4. The alcohol increases the production of ADH which causes the kidney to produce more urine.
 |  | 4 Apply concepts |
| The buccal region is \_\_\_\_\_\_\_\_\_\_\_\_\_ to the carpal region.

|  |  |
| --- | --- |
| 1. anterior
 | 1. inferior
 |
| 1. posterior
 | 1. superior
 |

 |  | 2Compare/Classify |
| A bone fractured at a right angle to the bone’s axis has a \_\_\_\_\_\_\_\_\_fracture.

|  |  |
| --- | --- |
| 1. spiral
 | 1. oblique
 |
| 1. greenstick
 | 1. transverse
 |

 |  | 1Recall |
| Which hormone releases osteoclast activity to release more calcium ions into the bloodstream?

|  |  |
| --- | --- |
| 1. calcitonin
 | 1. thyroxine
 |
| 1. parathyroid hormone
 | 1. estrogen
 |

 |  | 2Compare/Cause & Effect |
| The backbone of a DNA molecule is made of which two components?

|  |
| --- |
| 1. phosphate molecules and ribose sugars
 |
| 1. deoxyphoshosphate molecules and ribose sugars
 |
| 1. phosphate molecules and deoxyribose sugars
 |
| 1. deoxyphoshosphate molecules and deoxyribose sugars
 |

 |  | 1Define/Identify |
| Gel electrophoresis separates nucleic acids by:

|  |  |
| --- | --- |
| 1. size
 | 1. shape
 |
| 1. size and shape
 | 1. neither size nor shape
 |

 |  | 2Cause & Effect,Relate |
| Ankle Brachial Index (ABI) is used to help diagnose \_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |
| --- | --- |
| 1. coronary disease
 | 1. peripheral artery disease
 |
| 1. arteriosclerosis
 | 1. atherosclerosis
 |

 |  | 2Cause & Effect,Interpret |
| Which of the following is the correct order of healing of a bone fracture?

|  |
| --- |
| 1. hematoma formation, fibrocartilage callus formation, bony callus formation, bone remodeling
 |
| 1. fibrocartilage callus formation, bony callus formation, hematoma formation, bone remodeling
 |
| 1. hematoma formation, bony callus formation, fibrocartilage callus formation, bone remodeling
 |
| 1. fibrocartilage callus formation, hematoma formation, bony callus formation, bone remodeling
 |

 |  | 2Identify Patterns & Organize |
| Rigor mortis occurs because

|  |
| --- |
| 1. the cells are dead
 |
| 1. the sodium ions are diffusing out of the muscle
 |
| 1. ATP is not present to release the attached actin and myosin
 |
| 1. proteins are beginning to break down, thus preventing the flow of calcium ions
 |

 |  | 2Cause & Effect/Interpret |
| The bone on the posterior surface of the head is

|  |  |
| --- | --- |
| 1. frontal
 | 1. parietal
 |
| 1. occipital
 | 1. temporal
 |

 |  | 2Relate |
| Which of the following bones is the BEST to use to determine the age of a person?

|  |  |
| --- | --- |
| 1. skull
 | 1. femur
 |
| 1. pelvic girdle
 | 1. scapula
 |

 |  | 4Analyze Results & Apply Concepts |
| Which are the steps involved in the formation of urine by the kidneys?

|  |
| --- |
| 1. Filtration, reabsorption, secretion
 |
| 1. Filtration, excretion, reabsorption
 |
| 1. Reabsorption, excretion, secretion
 |
| 1. Excretion, filtration, secretion
 |

 |  | 2Relate/Compare/Organize |
| The most distal bones in the arm are the

|  |  |
| --- | --- |
| 1. carpals
 | 1. metacarpals
 |
| 1. metatarsals
 | 1. phalanges
 |

 |  | 2Relate |
| Which membrane protein is responsible for restoring the original concentration of ions during the action potential?

|  |  |
| --- | --- |
| 1. Na channel
 | 1. K channel
 |
| 1. Na/K pump
 | 1. All listed answers are correct
 |

 |  | 2Cause & Effect/Relate/Compare |
| Which statement about lymphocytes is correct?

|  |
| --- |
| 1. The two types are T-cells and macrophages
 |
| 1. B-cells produce plasma cells, which secrete antibodies into the blood
 |
| 1. T-cells are the precursors of B-cells
 |
| 1. T-cells are the only form of lymphocyte
 |

 |  | 2Distinguish/Summarize |
| John Jones has always been relatively healthy. He eats well, but he has smoked a pack a day on and off for 30 years. Lately, he has noticed cramping in his right calf when he exercises. The pain goes away once he stops and rests, but John is starting to think that something might be wrong. John also reports frequent tingling in his leg, almost like it is falling asleep. His doctor decides to do an ABI test. His ABI test come back and his ABI on his right side of his body is 0.5. The doctor’s then diagnose John with

|  |  |
| --- | --- |
| 1. arteriosclerosis
 | 1. atherosclerosis
 |
| 1. artiumsclerosis
 | 1. multiple schlerosis
 |

 |  | 4AnalyzeApply concepts |
| The cell responsible for forming new bone is

|  |  |
| --- | --- |
| 1. osteocyte
 | 1. osteoblast
 |
| 1. osteoclast
 | 1. chondrocyte
 |

 |  | 1Recall/Memorize |
| Which of the following statements indicates the way in which the body’s natural defenses protect the skin from the effects of UV damage?

|  |
| --- |
| 1. The skin is protected by the synthesis of 3 pigments that contribute to the skin’s color
 |
| 1. Carotene is synthesized in large amounts in the presence of sunlight
 |
| 1. The skin is protected by activating the immune system response
 |
| 1. Prolonged exposure to the sun induces melanin dispersion, which acts as a natural sunscreen
 |

 |  | 2Summarize/Cause & Effect |
| Oxygen and carbon dioxide are exchanged in the lungs and through all cell membranes by

|  |  |
| --- | --- |
| 1. osmosis
 | 1. filtration
 |
| 1. diffusion
 | 1. active transport
 |

 |  | 1Recall/Memorize |
| The gliding motion of the wrist is accomplished because of the \_\_\_\_\_\_ joint.

|  |  |
| --- | --- |
| 1. hinge
 | 1. plane
 |
| 1. pivot
 | 1. condyloid
 |

 |  | 1Recall/Memorize |
| The primary sensory cortex is part of the

|  |  |
| --- | --- |
| 1. parietal lobe
 | 1. cerebellar hemisphere
 |
| 1. frontal lobe
 | 1. limbic system
 |

 |  | 1Recall/Memorize |
| Having cells joined closely together on a surface is a characteristic of which type of tissue?

|  |  |
| --- | --- |
| 1. epithelial
 | 1. connective
 |
| 1. muscular
 | 1. neural
 |

 |  | 2Make Observations |
| Where is the energy stored in ATP?

|  |
| --- |
| 1. Ribose sugar bonds
 |
| 1. Phosphate bonds
 |
| 1. Adenine bonds
 |
| 1. Throughout the entire ATP molecule
 |

 |  | 1Recall/Memorize |
| Light passes through the following structures in which order?

|  |
| --- |
| 1. vitreous humor, lens, aqueous humor, cornea
 |
| 1. cornea, aqueous humor, lens, vitreous humor
 |
| 1. cornea, vitreous humor, lens, aqueous humor
 |
| 1. aqueous humor, cornea, lens, vitreous humor
 |

 |  | 2Summarize/Interpret/Organize |
| Blood within the pulmonary veins returns to the

|  |  |
| --- | --- |
| 1. right atrium
 | 1. left atrium
 |
| 1. right ventricle
 | 1. left ventricle
 |

 |  | 2Organize/Summarize |
| The most proximal bone of the leg would be the

|  |  |
| --- | --- |
| 1. humerus
 | 1. tibia
 |
| 1. coxal
 | 1. femur
 |

 |  | 2Compare/Relate |
| \_\_\_\_\_\_\_\_\_\_\_\_\_ have surface \_\_\_\_\_\_\_\_\_ where \_\_\_\_\_\_\_\_\_\_ attach.a. pathogens, antibodies, antigens b. antibodies, antigens, pathogens c. pathogens, antigens, antibodies d. antibodies, pathogens, antigens e. antigens, pathogens, antibodies |  | 2Summarize/Relate |
| When thyroid hormone levels decrease the hypothalamus 1. Releases more TRH
2. Release less TRH
3. Releases more TSH
4. Releases less TSH
 |  | 2Cause & Effect |
|  The epidermis is responsible for protecting the body against invasion of bacteria and other foreign agents primarily because it is composed of

|  |
| --- |
| 1. stratified columnar epithelium
 |
| 1. three layers of keratinized cells only
 |
| 1. four different cell shapes
 |
| 1. found in five distinct layers
 |

 |  | 3Compare/Differentiate/Critique |

The

