Tissues Practice Quiz Answer Key PDF

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What type of tissue is responsible for transmitting electrical impulses throughout the body?

A. Epithelial
B. Connectiv
C. Muscle
D. Nervous ✓

Which of the following are functions of epithelial tissue?

A. Protection ✓
B. Absorption ✓
C. Contraction
D. Secretion ✓

Which type of connective tissue is characterized by a liquid matrix?

A. Bone
B. Blood ✓
C. Cartilage
D. Adipose

Connectivetissue can be found in which of the following structures?

A. Blood ✓
B. Skin
C. Tendons ✓
D. Intestinal lining

Explain how the structure of connective tissue relates to its function in the body. Provide examples to support your explanation.

The structure of connective tissue, which includes a matrix of fibers (like collagen and elastin) and a variety of cell types (such as fibroblasts and macrophages), allows it to provide support and elasticity (as seen in tendons and ligaments), store energy (as in adipose tissue), and facilitate transport (as in blood). For example, the dense structure of tendons provides strength for muscle attachment, while the loose structure of areolar tissue allows for flexibility and cushioning around organs.

Which subtype of epithelial tissue is composed of a single layer of flat cells?

A. Stratified squamous
B. Simple cuboidal
C. Simple squamous ✓
D. Stratified columnar

Which characteristics are typical of muscle tissue?

A. Contractility ✓
B. Conductivity
C. Elasticity ✓
D. Rigidity

Describe the role of epithelial tissue in the human body and discuss how its structure enables it to perform its functions effectively.

Epithelial tissue plays a crucial role in protecting underlying structures, facilitating absorption and secretion, and sensing environmental changes. Its structure, which includes tightly packed cells with specialized junctions, enables it to form effective barriers and surfaces for exchange.

Which type of muscle tissue is under voluntary control?

A. Cardiac
B. Smooth
C. Skeletal ✓
D. None of the above

Nervous tissue is primarily responsible for which of the following functions?

A. Sensory reception ✓

B. Mechanical support

C. Signal transmission ✓

D. Nutrient storage

Compare and contrast the three types of muscle tissue in terms of structure, function, and location in the body.

Skeletal muscle is striated, voluntary, and found attached to bones; cardiac muscle is striated, involuntary, and located in the heart; smooth muscle is non-striated, involuntary, and found in walls of hollow organs.

Which type of epithelial tissue is specialized for absorption and secretion?

A. Simple columnar ✓

B. Stratified squamous

C. Transitional

D. Pseudostratified columnar

Which of the following are characteristics of cardiac muscle tissue?

A. Striated appearance ✓

B. Voluntary control

C. Intercalated discs ✓

D. Multinucleated cells

Discuss the importance of nervous tissue in maintaining homeostasis within the body. Include examples of how it interacts with other tissue types.

Nervous tissue is essential for maintaining homeostasis as it processes sensory information and coordinates responses, interacting with muscle tissue for movement and endocrine tissue for hormonal regulation.

Which connective tissue type provides a smooth surface for joint movement?

A. Dense regular

B. Elastic
C. Cartilage ✓
D. Bone

Which of the following are components of the extracellular matrix in connective tissue?

A. Collagen fibers ✓
B. Elasti ✓
C. Keratin
D. Ground substance ✓

Analyze how the structure of bone tissue contributes to its function in the body. Discuss the cellular components and matrix.

Bone tissue is composed of a mineralized matrix and various cells, including osteocytes, osteoblasts, and osteoclasts, which together provide strength, flexibility, and the ability to remodel in response to stress.

Which muscle tissue type is found in the walls of hollow organs?

A. Skeletal
B. Cardiac
C. Smooth ✓
D. None of the above

Functions of adipose tissue include:

A. Energy storage ✓
B. Insulation ✓
C. Structural support
D. Protection ✓

Evaluate the role of muscle tissue in movement and posture. How do different types of muscle tissue contribute to these functions?

Skeletal muscle tissue is primarily responsible for voluntary movements and maintaining posture, while cardiac muscle tissue facilitates heart contractions, and smooth muscle tissue controls involuntary movements in various organs.

Which epithelial tissue type is most likely to be found in areas subject to abrasion?

A. Simple squamous

B. Stratified squamous ✓

C. Simple cuboidal

D. Transitional

Which types of cells are found in nervous tissue?

A. Neurons ✓

B. Osteocytes

C. Glia ✓

D. Chondrocytes

Reflect on the interdependence of different tissue types in the human body. How do they work together to maintain overall health and function?

The interdependence of tissue types is crucial; for example, muscle tissue relies on connective tissue for support and blood supply, while nervous tissue coordinates the activities of muscle and epithelial tissues to ensure proper function and health.

Which of the following is NOT a function of connective tissue?

A. Support ✓

B. Absorption

C. Protection ✓

D. Transportation ✓

Discuss the adaptive significance of having different types of epithelial tissues in various parts of the body. How does this diversity enhance functionality?

Different types of epithelial tissues, such as simple squamous, cuboidal, and columnar epithelium, are adapted to specific functions in various parts of the body. For example, simple squamous epithelium facilitates diffusion in the lungs, while stratified squamous epithelium provides

protection in the skin, demonstrating how this diversity enhances the functionality of different organs.