

Module 10: Inheritance — Study Questions

Introduction to Tissues

1. What is a tissue, and how does it relate to cells and organs?
2. What are the four main types of tissues found in the human body?
3. What is histology, and why is it important in medicine?
4. How do tissues work together to form organs?

Epithelial Tissue

1. What are the general characteristics of epithelial tissue?
2. What are the three main cell shapes found in epithelium?
3. What is the difference between simple and stratified epithelium?
4. Where would you find simple squamous epithelium, and what is its function?
5. Why is stratified squamous epithelium found in areas subject to abrasion?
6. What is pseudostratified epithelium? Give an example of where it is found.
7. What is the basement membrane, and what role does it play?
8. How does the structure of epithelium relate to its functions of protection, secretion, and absorption?

Connective Tissue

1. What are the three main components of connective tissue?
2. How is connective tissue different from epithelial tissue in terms of cell arrangement?

3. Compare loose connective tissue and dense connective tissue.
4. What are the three types of fibers found in connective tissue, and what are their properties?
5. What are the three types of cartilage, and where is each found?
6. How is bone tissue different from cartilage?
7. Why is blood considered a connective tissue?
8. What is the extracellular matrix, and why is it important in connective tissue?

Muscle Tissue

1. What are the three types of muscle tissue?
2. What are the differences between voluntary and involuntary muscle?
3. Describe the appearance of skeletal muscle cells. Why are they called "striated"?
4. How is cardiac muscle similar to and different from skeletal muscle?
5. Where is smooth muscle found, and what functions does it perform?
6. Why is cardiac muscle described as having intercalated discs?

Nervous Tissue

1. What are the two main cell types in nervous tissue?
2. Describe the structure of a neuron and the function of each part.
3. What is the function of glial cells?
4. Where is nervous tissue found in the body?
5. How does the structure of neurons relate to their function of transmitting information?