LEARNING GOALS

LECTURE 1: CELLS, HISTOLOGY, AND TISSUE TYPES

Explain how cells and tissues are related in the organization of the body

STRUCTURE: MICROSCOPIC ANATOMY OF CELL

1) Describe the functions and characteristics of plasma membrane, and nine organelles, ribosomes, rough endoplasmic reticulum (ER), smooth ER, Golgi apparatus, lysosomes, mitochondria, peroxisomes, centrioles, and cytoskeleton (see below).

2) Interpret the cell type based on the abundance of certain organelles

3) Describe the composition and function of three cytoskeletal elements: microtubules, microfilaments, and intermediate filaments

4) Compare and contrast the three cytoskeletal elements

CELL CONTACTS

5) Describe the function of three specialized contacts/junctions: tight junctions, desmosomes, and gap junctions

6) Predict the location of specialized contacts based on their functions

CLASSIFICATIONS: TISSUE TYPES AND ROLE IN ORGANIZATION OF AN ORGAN

7) Define cell, tissue, organ, and organ system and illustrate the definitions of each using examples from Chapters 1 and 2.

8) List the four types of tissues found in the body, epithelial, connective, muscle, nervous.