

1. All connective tissues arise from _____, an embryonic tissue.
2. Describe the vascularity of connective tissues, which are very diverse. _____
3. Describe the innervation of connective tissues. _____
4. The extracellular matrix is made up of _____ that separates cells and _____.
Name the types of fibers found in connective tissue. _____
5. Ground substance is made up of _____, _____ and _____.
6. Describe each of the fibers.
Collagen _____
Elastic _____
Reticular _____
7. A " _____ " is an immature cell that secretes matrix.
A " _____ " is a mature cell that maintains matrix.
8. Give the functions of these cells.
Fibroblasts _____
Chondroblasts _____
Chondrocytes _____
Osteoblasts _____
Osteocytes _____
Osteoclasts _____
Adipocytes _____
White blood cells
Neutrophils and eosinophils _____
Monocytes _____
Basophils/mast cells _____
Lymphocytes _____
Plasma cells _____
Red blood cells _____
Platelets _____

9. List the 3 types of tissues considered loose connective tissue proper.

10. List the 3 types of tissues considered dense connective tissue proper.

11. List the 3 types of cartilage _____

Which type is the most abundant? _____

GIVE FUNCTIONS FOR THESE CONNECTIVE TISSUES

12. Areolar _____

13. Adipose _____

14. Reticular _____

15. Dense regular _____

16. Dense irregular _____

17. Elastic _____

18. Hyaline cartilage _____

19. Elastic cartilage _____

20. Fibrocartilage _____

21. Bone _____

22. Blood _____

MUSCLE

23. Name the 3 types of muscle tissue and give their functions

Indicate the muscle type:

24. Striated _____ Not striated _____

25. Bifurcated _____ Spindle shaped _____

26. Voluntary _____ Involuntary _____

27. Many nuclei _____ Single nucleus _____

28. Intercalated discs _____

Function of intercalated discs _____

NERVOUS

29. Give the general name for the supportive cells and give some functions. _____

30. Name the major functional cell and give its function. _____

31. Give the functions for the parts of the neuron.

Dendrites _____

Cell body (soma) _____

Axon _____

Telodendria _____

32. What is a synapsis? _____

MEMBRANES

33. Name the two tissues that form membranes _____

34. Indicate locations for these membranes.

Cutaneous _____

Mucous _____

Serous _____

Synovial _____

35. Give functions for the membranes.

Cutaneous _____

Mucous _____

What is the function of goblet cells? _____

Serous _____

Synovial _____

FASCIA

36. List the 3 types of fascia. _____

37. What produces fascia. _____

38. What are the functions. _____

1. mesenchyme
2. blood vessels vary from none to a few to many
3. most connective tissues have nerves; exception - cartilage, lacks nerves
4. ground substance; fibers; collagen, elastic, reticular
5. interstitial fluid; cell adhesion proteins; proteoglycans
6. collagen - thick; resists longitudinal pulling forces
elastic - smaller than collagen; stretches and recoils back to original shape
reticular - smallest; forms branching networks that surround and support
7. "blast"; "cyte" (*endings used with prefixes that indicate the specific type of cell*)
8. fibroblasts - form fibers; chondroblasts - secrete matrix; chondrocytes - maintain matrix;
osteoblasts - form bone; osteocytes - maintain bone; osteoclasts - break down bone;
adipocytes - for adipose tissue;
WBC: neutrophils and eosinophils - microphages; monocytes - macrophages;
basophils/mast cells - release histamine and heparin; lymphocytes - specific immunity;
plasma cells - produce antibodies
RBC - carry oxygen; platelets - initiate blood clotting
9. areolar, adipose, reticular
10. dense regular, dense irregular, elastic
11. hyaline, elastic, fibrocartilage; hyaline
12. supports and binds; body defense; stores nutrients; holds fluid
13. insulates; protects by padding organs
14. internal framework in soft organs
15. attaches muscle to bones and bones to bones; resists pulling forces in one direction
16. withstands pulling forces in many directions
17. expansion and contraction of organs; stabilizes vertebrae
18. flexible support; withstands compression
19. maintains shape of structures while allowing flexibility
20. withstands heavy compression
21. supports body; protects organs; stores calcium; stores fat; forms blood cells
22. transports nutrients, gases, ions, wastes, hormones, proteins; body defense; blood clotting
23. skeletal - moves bones
cardiac - pumps blood; maintains blood pressure
smooth - moves substances (food, urine, baby, blood) through organs
24. striated - skeletal and cardiac; not striated - smooth
25. bifurcated - cardiac; spindle shaped - smooth
28. voluntary - skeletal; involuntary - cardiac and smooth
27. many nuclei - skeletal; single nucleus - cardiac and smooth
28. cardiac; specialized gap junctions for communication between cells; heart functions as a unit
29. neuroglia; provide nutrients and chemicals, and isolate neural tissue
30. neuron; transmits electrical signals
31. dendrites - receive afferent electrical signals; cell body (soma) - control center;
axon - transmits efferent electrical signals;
telodendria - contain synaptic bulbs that release neurotransmitters
32. connection between the axon and another neuron, organ or gland
33. epithelial and connective

34. cutaneous - skin (integumentary system)
mucous - systems open to exterior (digestive, urinary, reproductive)
serous - areas not open to exterior (pericardium, pleura, peritoneum)
synovial - in freely movable joints
35. cutaneous - protective barrier - from chemicals and pathogens; makes vitamin D
mucous - barrier to pathogens; lubricates (mucus produced by goblet cells)
serous - prevents friction as organs move
synovial - lubricates joints and provides nutrients and oxygen
36. superficial, deep, subserosal
37. membranes
38. gives support to organs; walls off infections; compartmentalizes body