These review questions are for the Tissues lecture topics. The questions were adapted from several sources, including 1700+ Review Questions for Anatomy and Physiology II (3rd edition) by R. Michael Anson, Ph.D.

Multiple choice review questions:

1) Which term is used to describe the part of a neuron that detects stimulation?
   A) matrix
   B) dendrites
   C) axon
   D) myosin

2) The fibrous protein abundant in dense connective tissue is:
   A) insulin.
   B) cartilage.
   C) collagen.
   D) dentin.

3) The skin is considered an organ because it
   A) produces pigments.
   B) is composed of at least two tissues.
   C) protects the body.
   D) allows the body to detect sensory stimuli.

4) Adipose tissue is a type of
   A) cartilage
   B) endoplasmic reticulum
   C) connective tissue.
   D) blood.

Answers to multiple choice problems:

1) B
2) C
3) B
4) C

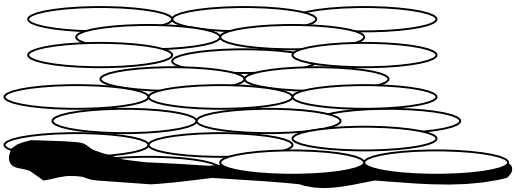
Fill-in-the-blank review questions:

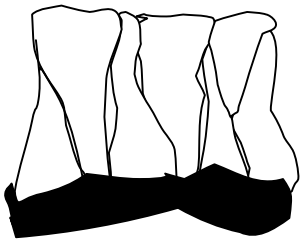
1) The smallest living unit of the body is the _____.

2) The four major tissues types of the body are _____, _____, _____ and _____.

3) _____ tissue has tightly packed cells that form protective linings, such as the skin and the inner lining of hollow organs.

4) Name the two epithelial tissues types shown below and answer the questions beneath the drawings. Use the full and complete names of each tissue for full credit.





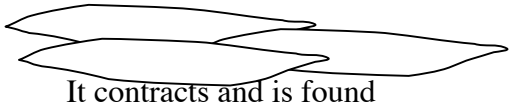
Tissue: _____ Tissue: _____

What do the black lines underneath each tissue represent?

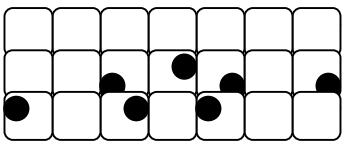
5) We discussed three types of muscle tissue in class. In the blank after each description, name the muscle tissue type(s) that match the description. Some blanks may have more than one answer. Write all answers.

a) You cannot make it contract whenever you want: _____
b) It is found only in the heart: _____
c) It is the only voluntary type of muscle: _____
d) It is usually found as part of hollow organs: _____
e) It has actin and myosin inside: _____

6) The drawings below shows cells from three of the tissues we discussed in lecture (the black dots are the nucleus of each cell). From the picture of the cells and description of the tissue, name each tissue type. Give the full and complete name of the tissue, which will require more than a one-word answer.



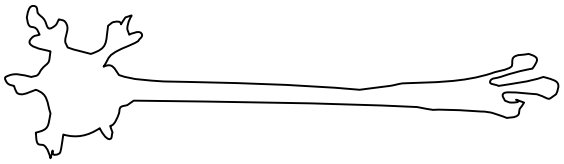
It contracts and is found in many internal organs (such as the stomach). _____



It lines internal cavities. _____

7) _____ tissue is characterized by cells that carry signals rapidly between body parts.

8) The cell below is a _____.



9) The single long extension of the neuron cell body is called a _____. Its function is to _____.

10) The smaller numerous extensions from the neuron cell body are called _____. Their function is to _____.

11) The cells of connective tissue do/don't (circle one) touch their neighbors.

12) The _____ is the term for all the material that fills the spaces between the cells of connective tissues.

13) Which of the connective tissue types is…

a) A soft jelly-like tissue that surrounds and protects many organs in the body? _____

b) Is part of tendons and ligaments? _____

14) _____ is a tough, extremely strong fibrous protein which gives dense connective tissue strength.

15) The major cells in loose and dense connective tissue are called _____.

16) The major cells in bone are called _____.

17) The major cells in cartilage are called _____.

18) Name the three types of cartilage: _____, _____, and _____.
Circle the one that forms discs between weight-bearing joints. Draw a star on the one that is found covering the tips of bones. Draw a box on the softest, most flexible type.

19) _____ tissue is the one connective tissue where the cells are packed tightly together, so it has no extracellular matrix.

20) Name the three types of blood cells: _____, _____, and _____.
Circle the type that controls blood clotting. Draw a star on the type that carries oxygen. Draw a box on the type that fights infections.

21) Write the full name of the connective tissue types described below. Be as exact as possible. Some answers require more than one word.

a) Stores fat: _____

b) Its extracellular matrix is many strands of collagen with little ground substance: _____

c) Has a liquid matrix _____

d) Its extracellular matrix is made of calcium phosphate _____

e) A rubbery tissue found at the tips of bones _____

22) The six major classes of connective tissue are _____, _____, _____, _____, _____, and _____.

23) Name the type of protein fiber found in the extracellular matrix of almost all connective tissues: _____. There are two connective tissues, however, that have little if any of this protein in their extracellular matrix. Name the two connective tissues that do not contain this protein: _____.

24) An organ is a structure made of several types of _____ working together for a common task.

25) Several organs working together on a common task form a(n) _____.

26) Arrange the following terms in the proper order, from smallest to largest:

Organ
Tissue
Organ system
Cell
Organelle

Answer to fill-in-the-blank review questions:

1) Cell
2) Epithelial
Muscle
Nervous
Connective
3) Epithelial
4) Stratified squamous epithelial
Pseudostratified columnar epithelial
Basement membrane
5) Smooth and cardiac muscle
Cardiac muscle
Skeletal muscle
Smooth muscle
Skeletal, smooth, and cardiac muscle
6) Smooth muscle
Stratified cuboidal
7) Nervous
8) Neuron
9) Axon
Carry nervous signals
10) Dendrites
Detect stimuli
11) Don't
12) Extracellular matrix
13) a) Loose connective tissue
b) Dense connective tissue
14) Collagen
15) Fibroblasts

16) Osteocytes
17) Chondrocytes
18) Hyaline cartilage (star)
Elastic cartilage (boxed)
Fibrocartilage (circled)
19) Adipose
20) Red blood cells (star)
White blood cells (boxed)
Platelets (circled)
21) Adipose
Dense connective tissue
Blood
Bone
Hyaline cartilage
22) Loose connective
Dense connective
Bone
Cartilage
Adipose
Blood
23) Collagen
Adipose
Blood
24) Tissue
25) Organ system
26) Organelle
Cell
Tissue
Organ
Organ system

Short answer review questions:

1) A tissue is defined as:

2) We discussed six basic types of connective tissue in class. In the table below, name each tissue type, the cell(s) found in the tissue, and the composition of its extracellular matrix (the protein fibers and ground substance). (Adipose does not have an extracellular matrix).

Connective Tissue:	Cell(s):	Extracellular matrix:
a) _____	_____	_____
b) _____	_____	_____
c) _____	_____	_____
d) _____	_____	_____
e) _____	_____	_____
f) _____	_____	_____

Answer to short answer review questions:

1) A tissue is a group of cells of the same type performing some function together.

2)

Connective Tissue:	Cell(s):	Extracellular matrix:
Loose connective	Fibroblasts	Jelly-like ground substance with some collagen
Dense connective	Fibroblasts	Almost entirely collagen
Bone	Osteocytes	Calcium phosphate ground substance with collagen
Cartilage	Chondrocytes	Chondrin ground substance with collagen
Adipose	Adipocytes	No matrix (cells are packed together)
Blood	Red blood cells White blood cells Platelets	Plasma ground substance. No fibrous proteins.