READING NOTES CHAPTERS 7 & 8: SKELETAL SYSTEM & JOINTS

Name _____
Period ___ Due date _____

Skeletal system introduction (p. 202)

Bones are not only living tissues, they are multifunctional. We tend to just think that the skeletal system protects our inner organs and provides support, but it also _____ and _____ softer tissues, provide points of _____ for muscles, house _____-producing cells, and store _____ salts.

Bones are classified according to their _____. For each bone type, include a brief description along with at least two examples:

Long:

Short:

Sesamoid (a special type of short bone):

Flat:

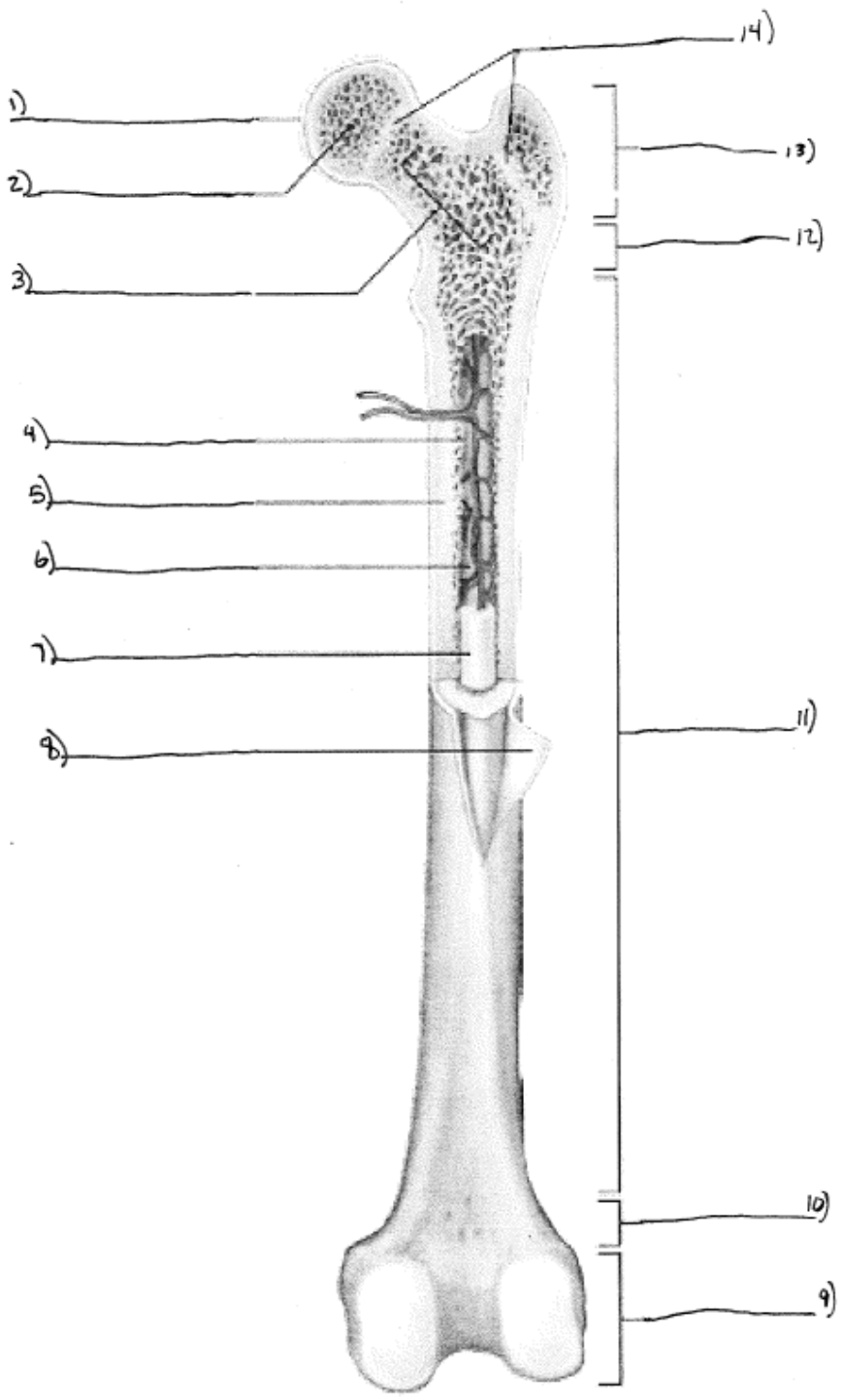
Irregular:

Bone structure (pages 203 – 204)

The wall of the diaphysis is mainly composed of tightly packed tissue called _____ bone. This type has a continuous matrix with no gaps. The epiphysis, on the other hand, is largely composed of _____ bone. This type consists of branching bony plates called _____. This allows for the bone to have irregular connecting spaces between plates to reduce the bone's _____.

Compact bone is composed of cells called _____, otherwise known as an **osteon**. Each osteon is composed layers called **lamella** and contains the following parts: **lacunae**, **Haversian canals, canaliculi**. We will be drawing and labeling the parts, along with listing their functions in the space below:

Label the diagram from page 203 of your text.



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Types of bone growth (pages 205 – 207)

Bones form when bone tissue, including a bony matrix mostly of _____ phosphate, replaces existing _____ tissue in one of two ways. For each of the ways listed below, provide a brief description of how each is achieved and examples of bones that grow from this type of ossification:

Intramembranous:

Endochondral:

Bone fractures (inset pages 212 – 213)

Bone breaks are classified into several categories. They are first determined to be **complete** or **incomplete**. Then they are determined to be either **displaced** (meaning they will need to be realigned or "set") or **nondisplaced** (which means the pieces are not out of alignment and need to be stabilized where they are). Lastly, bone breaks are classified according to the angle of which or type of fracture that has occurred. For each bone break listed below, provide a quick sketch as well as a description for your reference:

Incomplete greenstick:

Linear (or fissured):

Comminuted:

Transverse:

Oblique:

Spiral:

Bone breaks also can be tell us information about other things that may be going on in the body. **Potts fractures** are more commonly found in athletes due to extreme physical activity, while **Colles fractures** may be an indication that osteoporosis is taking hold. One cannot determine this type of fracture until the full case study has been disclosed – the circumstances behind the fracture must be known before such a determination can be made.

Joints introduction (page 270)

Joints, or _____, are junctions between bones. They vary considerably in _____ and _____, which explains why there are two different ways to classify them. For the classification types below, provide a description of the joint as well an example of that type:

Structural (pages 270 – 274)

Fibrous

Syndesmosis:

Suture:

Gomphosis:

Cartilaginous

Synchondrosis:

Symphysis:

Synovial

Monaxial (condylar, plane, hinge, pivot):

Biaxial (saddle):

Multiaxial (ball-and-socket):

Functional (page 270)

Synarthrosis:

Amphiarthrosis:

Diarthrosis: