

Functions of the Skeleton System

1. _____
2. _____
3. _____
4. _____
5. RBM = _____
6. YBM = _____

Cartilage Description

(3 terms)

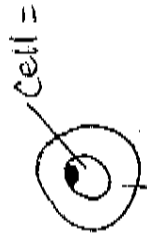
1. membrane = _____
2. Cells = _____
3. spaces = _____

③

3 Types of Cartilage

④

Tissue =

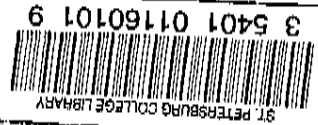


gel matrix



Space =

location =



BSC 10 85

Soft tissue & muscles

- 1) Support the body & anchors the organs
- 2) Protection - internal organs
- 3) movement (of muscles)
- 4) Mineral Homeostasis (stores Calcium & phosphate)
- 5) Blood Cell production = RED marrow
(Red & White blood cells & platelets found in marrow)
- 6) Triglyceride ^{energy} storage = Yellow marrow

- 1) Perichondrium - membrane around Cartilage
- 2) Chondrocytes - cells
- 3) Lacunae - spaces / cavity

1) Hyaline Cartilage

* Located in nose, ends of bones, trachea, larynx, epiphyseal plate

2) Elastic Cartilage

* location: ear epiglottis

3) Fibro Cartilage

* location: pubic Symphysis, Intervertebral discs

tissue = Hyaline Cartilage

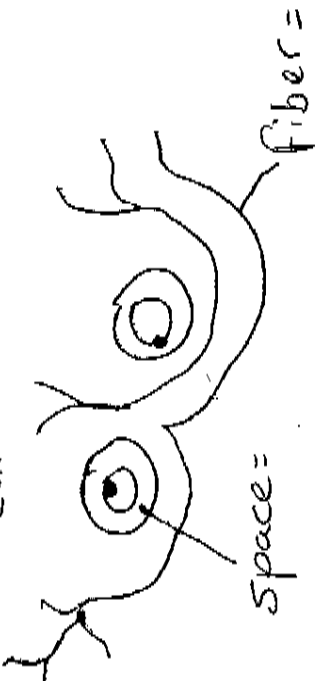
cell = Chondrocytes

Space = lacunae

location = end of long bones (articular cartilage), ends of ribs, nose, larynx, trachea & epiphyseal plate

Tissue =

cell =

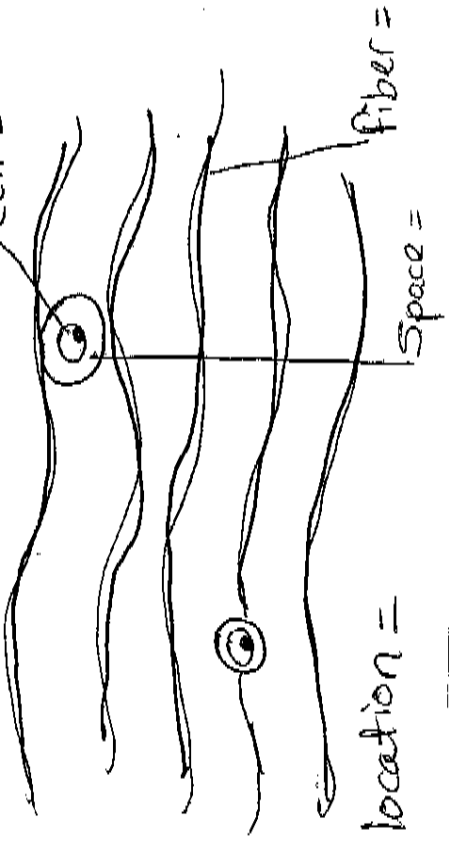


location =

P.O.D

Tissue =

Cell =

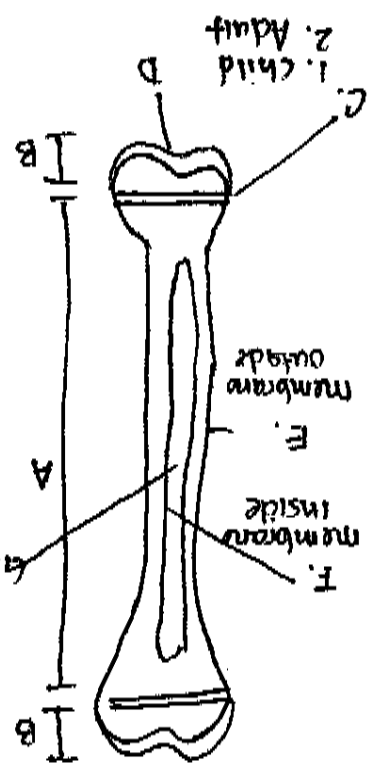


location =

7)

- Types of Bones
- 1. _____ = tissue = examples
 - 2. _____ = tissue = examples
 - 3. _____ = tissue = examples
 - 4. _____ = vertebrae
 - 5. _____ = patella

Anatomy of long Bone



7

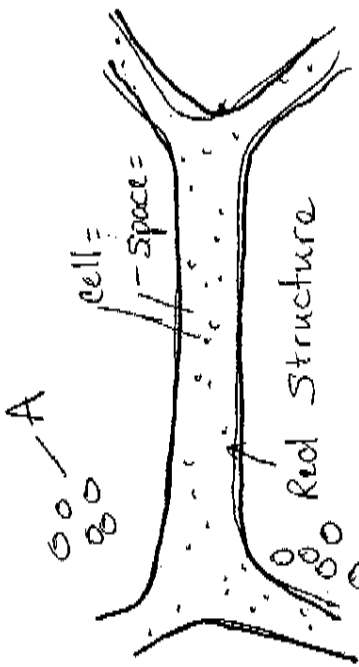
Tissue = elastic cartilage
 cell = chondrocyte
 space = lacunae
 location = ears & epiglottis
 fiber = elastic

Tissue: fibrocartilage
 cell: chondrocyte
 space: lacunae
 fiber: collagen fibers
 location: pubic symphysis, intervertebral discs, meniscus, knee pads

1. Long Bone = longer than it is wide & mostly compact
 ie: phalanges, femur, humerus, ulna, tibia, fibula
 2. Short Bone = cube shape & mostly spongy bone ie: ^{Carpals (wrist)} tarsals (ankle)
 3. Flat Bone = thin, & mostly spongy ie: cranial, some facial, sternum, scapula & ribs
 4. Irregular Bone = complex shapes ie: vertebrae
 ↳ some facial bones
 5. Sesamoid Bone = embedded in tendons ie: patella
 ↳ Palms & sole of foot

- A. Diaphysis
- B. Epiphysis
- C. Metaphysis
 - 1. epiphyseal plate
 - 2. epiphyseal line
- D. Articular cartilage
- E. Periosteum
- F. Endosteum
- G. Medullary cavity

p. 4-6



location = _____ and FxN _____

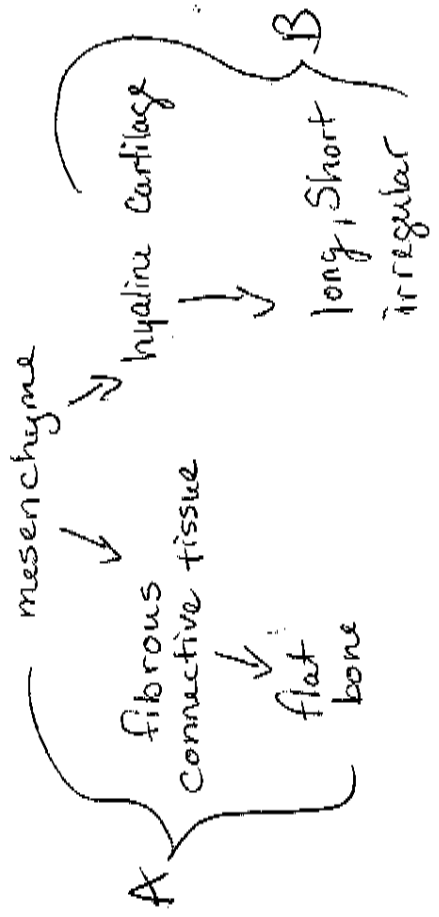
Endochondral Ossification (15)

- 1) primary ossification center occurs in the _____
- 2) secondary ossification center occurs in the _____
- 3) Result = _____ + _____



9-5-6

Bone formation (14)



Bone Growth (16)

- 1) growth in length _____
- 2) growth in width / thickness = _____
- 3) Calcitonin Causes _____ (PTH)
- 4) parathyroid causes _____

Tissue = Spongy bone (Cancellous)

doesn't contain true osteon

cells = osteocyte

space = lacunae

red structure = trabeculae

A = red bone marrow

FN: produces blood cells (all) + platelets
location = epiphysis

1) diaphysis

2) epiphysis

3) articular cartilage + epiphyseal plate

A) Intramembranous ossification

B) Endochondral ossification

1) epiphyseal plate

2) appositional growth - periosteum + endosteum

3) Calcium to go into bone - inhibits osteoclast

4) Calcium to go out of bone activates osteoclast