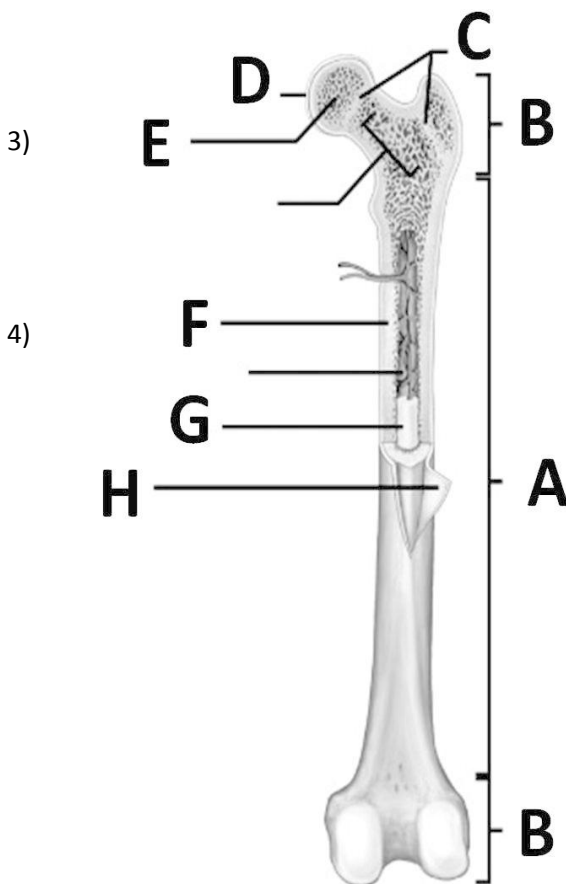


- 1) What is the primary difference between osteoporosis and osteoarthritis?
 - a. **Osteoporosis means to lose bone density/ have a “thinning” of bone in general, whereas osteoarthritis results in a thinning of cartilage. Also, osteoarthritis occurs in joints, not in each bone, as is the case with osteoporosis.**

2) Label this cross section of bone

- A) Diaphysis B) Epiphysis C) Epiphyseal Line D) Articular Cartilage E) Spongy Bone
 F) Endosteum and Medullary Cavity G) Bone Marrow H) Periosteum



True or False: Boils and Athletes foot are caused by the same pathogen

- a. **False, Boils are caused by staphylococcal bacteria while fungi causes athlete’s foot**

a. What skin disease is this picture indicating?

- a. Impetigo
- b. Indicate the layers of skin that are damaged? a. Usually just the epidermis, however *if it gets to ecthyma, then it invades the dermis (TB)*

c. What pathogen causes this disease? A. Bacteria; TB: Staphylococcus aureus or Staphylococcus pyogenes



- 5) List three components of bone marrow
 - A. **Erythrocytes, Plasma Cells, Lymphocytes, Monocytes, Megakaryocytes (precursors to platelets), etc.**

- 6) What types of joints are found in:
- a. Elbow- **Hinge**
 - b. Knuckles- **Condyloid, Metacarpophalangeal**
 - c. Neck- **Pivot**
 - d. Hip- **Ball and Socket**
- 7) A person comes in complaining of back pain, and upon looking at the X-Ray, you notice that the thoracic vertebrae is causing the issue.

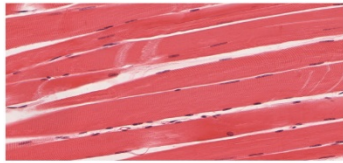


- 8) What does the integumentary system consist of? List three things
- a. **Skin, sweat glands, oil glands, nails and hair**
- 9) List 4 functions of the skin
- a. **Protection, Sensation, Temperature Regulation, Immunity, Permits movement/growth**
- 10) Ribs, Neck bones, Sternum are all part of the AXIAL skeleton while humerus, femur, ulna and radius are examples of bones that are part of the APPENDIGAL skeleton.
- 11) True or False: Scoliosis is based entirely on an individual's skeleton's exposures to harsh conditions.

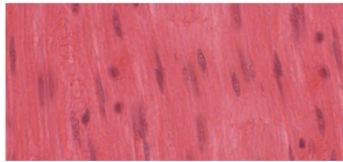
- a. **False, the real cause is still unknown, but it is mainly thought to be a mixture of genetic and environmental factors**

12) Identify the different types of muscle tissue:

- a. **Skeletal**
b. **Smooth**
c. **Cardiac**

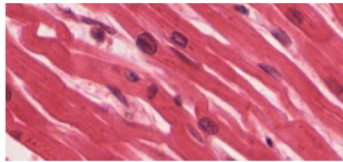


13)



Calcium binds to **troponin** to expose the **binding sites** for the **myosin heads** to attach to the **actin filament**. **The heads** are de-phosphorylated, allowing for binding to the **Sarcoplasmic Reticulum**.

14)



What is acetochole's role in the skeletal muscle contraction system? ***TB***

- a. **Sends the EPSP that ultimately allows for release of calcium for the process listed above**

15) List five functions of the muscular system

- a. **Structure, Movement, Heat production, Joint Stability, Protection, etc.**

16) What are the origin and the insertion of a muscle contraction process, from a general stance?

O: **Site of Muscle that is fixed and does not move during contraction**

I: **Site of Muscle that is not fixed and does move during contraction**

17) Explain how skeletal system muscles produce heat ***(TB)***

- a. **The skeletal muscles contract to prevent heat loss, thereby indirectly "producing heat" for the body when it needs to warm itself. It does**

this by contracting all of the blood vessels. * More explanation, better*

18) Continuous, strenuous exercise is a way to prevent strains and sprains: True or False

a. **False**

19) Due to exercise, _____ grow longer and stronger

a. **Tendons/Ligaments**

20) Due to aging, these bone cells start to lose their ability to heal and repair:

a. **Osteoclasts**

21) Muscular dystrophy is non genetic and there is no such thing as an oral vaccine for poliomyelitis: True or False

a. **False, muscular dystrophy is genetic while polio has an oral vaccine**