

What are Joints and Articulations?

Worksheet

Joints are connections between bones classified structurally as fibrous, cartilaginous, or synovial, and functionally as immovable (synarthrosis), slightly movable (amphiarthrosis), or freely movable (diarthrosis).

Questions

1. Which structural joint type has a fluid-filled cavity?
 - A) Fibrous
 - B) Cartilaginous
 - C) Synovial
 - D) Suture
2. What functional category describes an immovable joint?
 - A) Diarthrosis
 - B) Amphiarthrosis
 - C) Synarthrosis
 - D) Symphysis
3. Which of these is a cartilaginous joint?
 - A) Knee
 - B) Shoulder
 - C) Pubic symphysis
 - D) Elbow
4. The knee joint is best classified as which functional type?
 - A) Synarthrosis
 - B) Amphiarthrosis
 - C) Diarthrosis
 - D) Symphysis
5. Classify the knee joint structurally and functionally.
6. Classify a skull suture, such as the coronal suture.
7. The pubic symphysis widens slightly during childbirth. How is it classified?
8. Define: What is a joint (articulation)?
9. Define: What are the three structural joint types?
10. Define: What are the three functional joint types?

Answer Key

1. C) Synovial - Synovial joints have a joint capsule filled with lubricating synovial fluid.
2. C) Synarthrosis - Synarthrosis means 'immovable joint,' like skull sutures.
3. C) Pubic symphysis - The pubic symphysis is joined by fibrocartilage and allows only slight movement.
4. C) Diarthrosis - The knee moves freely through a large range of motion, making it a diarthrosis.
5. Structurally, the knee has a fluid-filled joint capsule and articular cartilage, so it is a synovial joint Functionally, it allows a large range of motion (flexion/extension) Therefore the knee is a synovial, diarthrotic (freely movable) hinge joint
6. Structurally, adjacent skull bones are joined by dense fibrous connective tissue, so it is a fibrous joint Functionally, sutures allow essentially no movement in the adult skull Therefore a suture is a fibrous, synarthrotic (immovable) joint
7. Structurally, the two pubic bones are joined by fibrocartilage, so it is a cartilaginous joint Functionally, it permits only slight movement, more so during late pregnancy under hormonal influence Therefore the pubic symphysis is a cartilaginous, amphiarthrotic (slightly movable) joint
8. Any point where two or more bones meet, whether or not they move.
9. Fibrous, cartilaginous, and synovial, based on the connecting tissue.
10. Synarthrosis (immovable), amphiarthrosis (slightly movable), diarthrosis (freely movable).

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