SNS COLLEGE OF PHYSIOTHERAPY
(Affiliated by the Tamil Nadu Dr. M. G. R. Medical University, Chennai.)
Saravanampatti Post, Coimbatore – 641 035, T.N

Puzzle Questions (Solve in Groups):

1. **True/False:** A joint is defined as the meeting point of three or more bones. (True or False?)
2. **Fill in the Blank:** In anatomy, a joint (articulation) is the site where _____ or more bones meet.
3. **Multiple Choice:** The primary functional classification of joints includes: a) Synovial, fibrous, cartilaginous b) Ball-and-socket, hinge, pivot c) Long, short, flat d) Primary, secondary, tertiary
4. **Short Answer:** Name the three main structural classifications of joints with one example each.
5. **True/False:** Synovial joints are classified as freely movable (diarthrosis). (True or False?)
6. **Fill in the Blank:** The knee joint is an example of a _____ (type) synovial joint.
7. **Multiple Choice:** Which of the following is NOT a synovial joint? a) Shoulder b) Elbow c) Pubic symphysis d) Hip
8. **Short Answer:** List any four essential features of a typical synovial joint.
9. **True/False:** Articulating surfaces in synovial joints are covered by hyaline cartilage to reduce friction. (True or False?)
10. **Fill in the Blank:** Stability of a synovial joint is mainly provided by ligaments, shape of bones, muscle tone, and the _____ capsule.
11. **Multiple Choice:** Which factor contributes most to the stability of the hip joint compared to the shoulder joint? a) Depth of the socket (acetabulum) b) Number of bursae c) Amount of synovial fluid d) Thickness of articular cartilage
12. **Short Answer:** Explain the inverse relationship between stability and mobility in synovial joints with examples.
13. **True/False:** Synovial joints have no nerve supply. (True or False?)
14. **Fill in the Blank:** The nerve supply of a synovial joint follows _____ law (nerve that supplies the muscles acting on the joint also supplies the joint).
15. **Multiple Choice:** In the athlete with recurrent shoulder dislocation, which feature of the glenohumeral joint explains the clinical problem? a) Excessive stability b) High mobility with relatively poor bony stability c) Absence of synovial fluid d) Lack of articular cartilage

Discussion (After Puzzle):

- Should treatment prioritize stability (strengthening) or controlled mobility first?
- How would you modify rehabilitation if the same injury occurred at the knee instead of the shoulder?
- Debate: Is the shoulder joint "poorly designed" for athletes, or is it an evolutionary advantage?

Answers:

1. False (two or more bones)
2. Two
3. a) Synovial, fibrous, cartilaginous
4. Fibrous (e.g., sutures of skull), Cartilaginous (e.g., intervertebral discs or pubic symphysis), Synovial (e.g., knee, shoulder)
5. True
6. Hinge (or modified hinge/condylar)
7. c) Pubic symphysis (cartilaginous – symphysis)
8. Any four: Articular (hyaline) cartilage, synovial cavity with fluid, articular capsule (fibrous + synovial layers), ligaments, blood vessels, sensory nerves (some have menisci, discs, or fat pads)
9. True
10. Fibrous (articular)
11. a) Depth of the socket (acetabulum)
12. The greater the range of movement (mobility), the less the stability, and vice-versa. Example: Shoulder (glenohumeral) joint – very mobile (circumduction, 360° rotation) but least stable (most commonly dislocated). Hip joint – deep ball-and-socket, very stable but much less range than shoulder.
13. False (richly supplied)
14. Hilton's
15. b) High mobility with relatively poor bony stability