

BPT 1st Year – Anatomy

Q.1. Classify joints with one example of each type. (10 Marks)

Definition:

A joint (articulation) is the junction between two or more bones or cartilages. Joints provide stability, support, and allow movements of the human body.

I. Fibrous Joints

In fibrous joints, the bones are united by fibrous connective tissue. There is no joint cavity and the movement is either absent or very slight.

- Suture – Example: Coronal suture of skull
- Syndesmosis – Example: Inferior tibiofibular joint
- Gomphosis – Example: Tooth in alveolar socket

II. Cartilaginous Joints

In cartilaginous joints, bones are united by cartilage and allow limited movement.

1. Primary cartilaginous joint (Synchondrosis):

Bones are united by hyaline cartilage. These joints are usually temporary.

Example: Epiphyseal plate of long bones.

2. Secondary cartilaginous joint (Symphysis):

Bones are united by fibrocartilage and these joints are strong and slightly movable.

Example: Pubic symphysis, intervertebral disc.

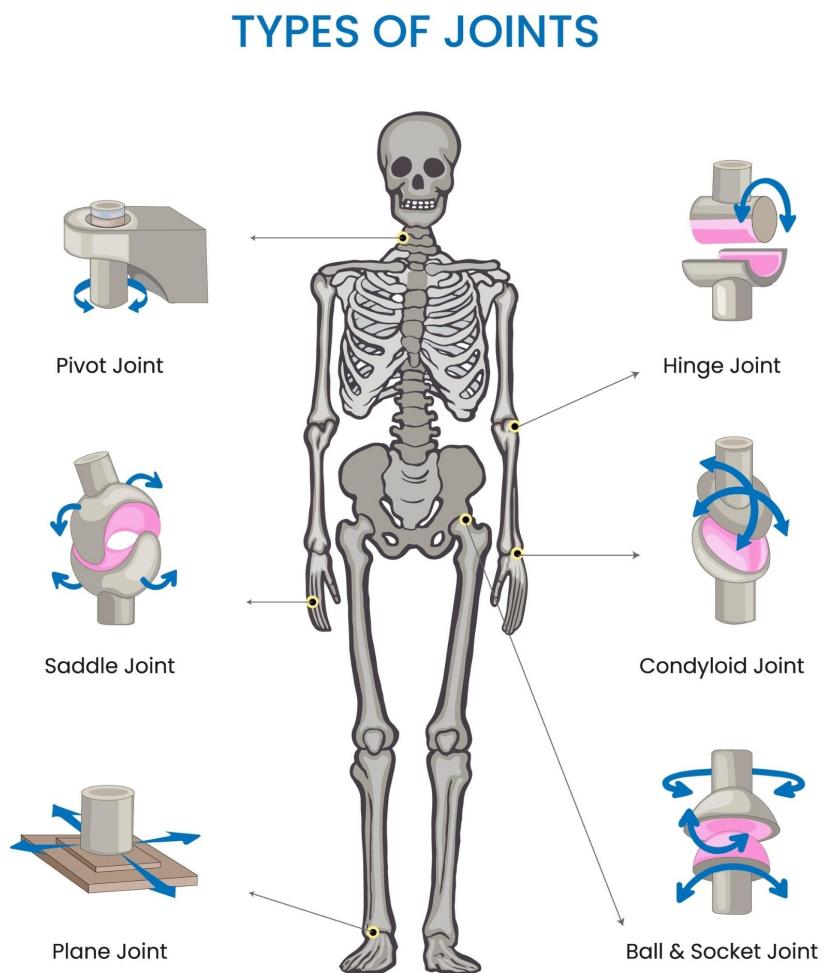
III. Synovial Joints

Synovial joints are characterized by the presence of a joint cavity, articular cartilage, synovial membrane, and synovial fluid. These joints permit free movement.

- Plane joint – Example: Intercarpal joints
- Hinge joint – Example: Elbow joint
- Pivot joint – Example: Atlanto-axial joint
- Condyloid joint – Example: Wrist joint
- Saddle joint – Example: First carpometacarpal joint

- Ball and socket joint – Example: Hip joint

Diagram: Types of Synovial Joints



Conclusion:

Thus, joints are classified into fibrous, cartilaginous, and synovial joints based on their structure and function, each having specific characteristics and examples.