

# 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.

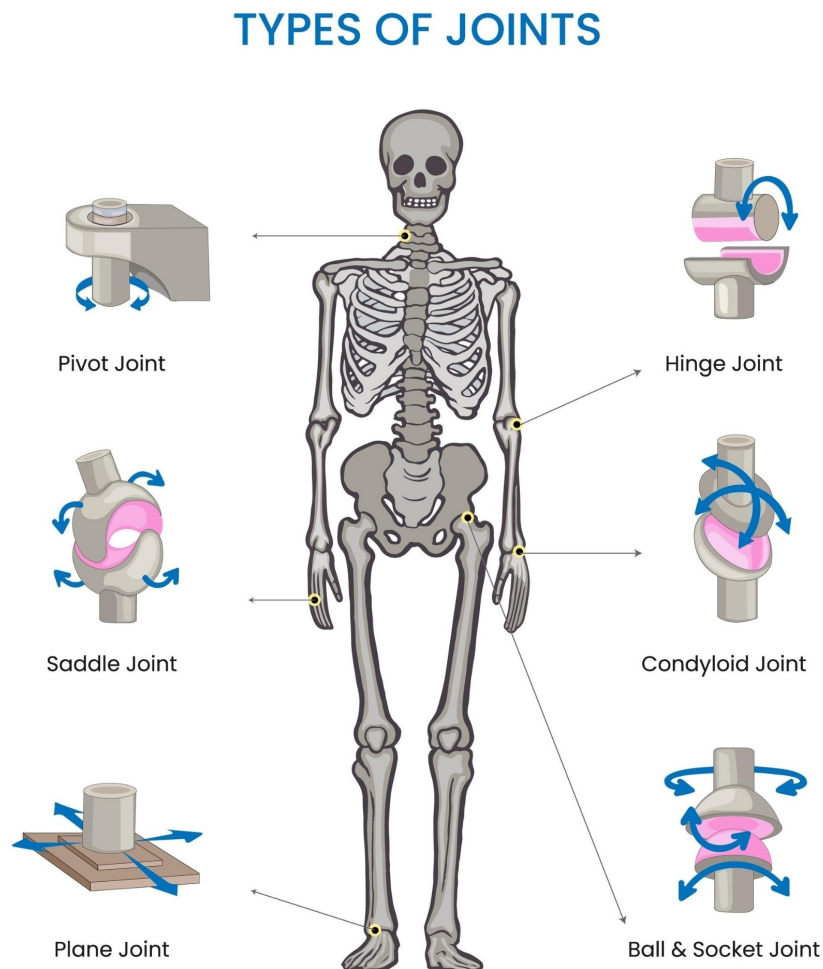
### **III. Synovial Joints**

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
- Condylod 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.