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Subject Human Anatomy

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# Question no:1

## Ans:

### Joints and upper limb

Definition:

The upper limb has a wide rang of precise

movement associated with it to allow us to

Effectively interact to our environment.

### There are 3 main joints:

1. Shoulder joint
2. Elbow joint
3. Wrist joint

### 1: Shoulder joint :

- The shoulder joint is where the humorous (Upper arm bone) meets the scapula (shoulder blade).
- Muscles and ligaments help make up the Joint.
- They attach to the shoulder blade and upper Arm bone.
- At the top of the shoulder blade are two bony Knobs called the chromion and coracoid Process.

### Articulation in shoulder joint:

- It is present in between the rounded head of the humerus and the shallow, pear -shaped glenoid cavity of the scapula.
- The surface of articular are covered by. ( Hayline articular cartilage )
- The GLENOID , or socket joint of the SHOULDER, is surrounded by a fibrocartilaginous supporting structure called the LABRUM.
- The glenoid Labrum (glenoid ligament)

is a fibrocartilaginous rim attached around the margin

of the glenoid cavity cavity in the shoulder blade.

## Type:

Synovial ball-and Socket joint.

## Capsule:

- It is surround the joint and is attached to:

*Medially*

- To the margin of the glenoid cavity outside the labram.

And

*Laterally*

- It is attach to the anatomic neck of humerus.
- The capsule is thin and lax, allowing a wide rang of movement.

## Ligaments:

*Glenohumeral ligaments :*

In the shoulder , the joint capsule is formed by a group

of the ligaments that connect the humerus to the glenoid.

These are main source of stability for the shoulder.

- They are superior, middle and inferior glenohumeral.

### The transverse ligament:

It strengthen, the capsule above and bridges the gap b/w

The two tuberosities.

### The corachumeral ligaments:

It strengthens the capsule above And streches from the

root of the corocoid.

## Accessory ligaments :

### 1: Coracoacromial ligament:

- It extends b/w the coracoid process and acromion.
- If function is to protect the superior aspect of the joint.

*Synovial memebran:*

- It is attached to the margins of the cartilage covering

The articular surface.

- It form a tubular sheath.

*Nerve supply:*

- The axillary and suprascapular nerves.

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# Elbow joint:

## Articulation:

- It occurs b/w trochlea and capitellun of the humerus.
- The trochlea notch of the ulna and the head of the Radius.
- It surface covered by Hyaline cartilage.

## Types:

Synovial hinge joint.

## Capsule:

ANTERIORLY it is attached ,

*Above:*

To the humerus .

*To the front:*

In front it attached to medial and leteral epicondyles.

*Below:*

To the margin of the Coroniod process of the ulna and

To the anular ligament.

*Posterity :*

It is attached ,

*Above:*

To the margin of the olecranon of the humerus .

*Below:*

To the upper margin and side of the olecranon.

# Ligaments:

- The radial / lateral collateral ligament is triangular And is attached,
- By the apex to the lateral epicondyle of the humerus.
- By its base to the upper margin of the anular ligaments.

### Medial ligament:

- It consist of three strong bands.

1. Anterior band:
   - It passes from the medial epicondyle of the humerus. To the Medial margin of the Coronoid process.
2. Posterior band:
   - To the medial side of the olecranon process.
3. Transverse band:
   - It passes between the ulnar attachments of the two preceding Bands.

### Synovial men:

- It is contineus below with the synovial membrane of the Poximal radioulnar joint.

### Nerve supply:

- Branches from
- Medium nerve
- Ulnar nerve
- Musculocutaneous nerve
- Radial nerve

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## Wrist joint:

### Articulation:

- The wrist joint is an ellipsoidal Condyloid type synavial joint Allowing for movement along two axes.
- This means that flexion, extension , aduction can all occur at The wrist joint.
- All movements the wrist are performed by the muscles of the Forearm.

### Capsule :

- The capsule enclosses the joint and I attached.

### Above:

- To the distal end of the radius and ulna.

### Below:

- To the proximal row of carpal bones.

*Type:*

- Synovial ellipsoid joint.

## Ligaments:

- Ligament, plamar radiocarpal.
- It is found on the Palmer anterior side of the hand.
- It passes from the radius to both rows of carpal bones.

## Nerve supply :

- Anterior interosseous nerve.
- Deep branch of the radial nerve.

## Of the hand and

## Fingers.

## Intercarpal joint:

## Articulation :

- Between the individual bones of the distal row of the carpal.
- And finally ,the midcarpal joint, between the proximal and distal rows of carpal bones.

## Capsule:

- The capsule surrounds each joint.

## Ligaments:

- The bones are united by strong anterior, posterior, and interosseous Ligaments.

## Synavial :

- Synavial joint allow for smooth movements between the adjacent bones.

## Nerves supply:

- Anterior interosseous nerve, deep branch of the radial nerve and deep Branch of the ulnar nerve.

## Type:

- Synovial plane joints.

## Movements:

- A small amount of gliding movement is possible.

## Carpometacarpal and intermetacarpal joint :

- The Carpometacarpal and intermetacarpal joints possessing anterior, posterior, And interosseous ligaments .they have a common joint cavity.

### Carpometacarpal joint the thumb:

#### Articulation:

- Between the trapezium and the saddle base of the first metacarpal bone.

### Type:

- Synavial saddle-shaped joint.

### Capsule:

- The capsule surrounds the joint.

### Synovial membrane :

- This lines the capsule and forms a separate joint cavity.

### Interphalangeal joint:

- Interphalangeal joints are synovial hing joints that have a structure similar To that of the metacarpophalangeal joints
  They are
- Proximal interphalageal joint
- Distal interphalangeal joint

*The end*