

2021-2025

Q-Bank

for **FCPS-1**

1st Edition | 2025

Medicine & Allied
Surgery & Allied
Gyne & Obs
Anesthesia
Radiology



DR RASHID MAHMOOD

DR MARIA ZAIB



TABLE OF CONTENTS

Q-BANK 2025 (FCPS PART- I)

| MAJOR SUBJECTS | |
|--|-----|
| 1. Anatomy (MCQs: 1514) | 03 |
| 1. Anatomy Upper limb (MCQs: 106) | 03 |
| 1. Anatomy Lower limb (MCQs: 239) | 20 |
| 1. Anatomy Thorax (MCQs: 162) | 38 |
| 1. Anatomy Abdomen & Pelvis (MCQs: 652) | 51 |
| 1. Anatomy Head & Neck (MCQs: 355) | 99 |
| 2. CNS (MCQs: 799) | 126 |
| 3. CVS (MCQs: 508) | 185 |
| 4. GIT (MCQs: 172) | 222 |
| 5. Renal (MCQs: 351) | 235 |
| 6. Respiratory (MCQs: 230) | 260 |
| 7. Endocrine (MCQs: 263) | 277 |
| 8. Reproductive (MCQs: 147) | 297 |
| 9. Musculoskeletal (MCQs: 42) | 308 |
| 10. Haematology (MCQs: 365) | 312 |
| MINOR SUBJECTS | |
| 11. General Anatomy (MCQs: 199) | 339 |
| 12. General Pathology (MCQs: 1007) | 354 |
| 13. Cell Physiology (MCQs: 59) | 426 |
| 14. Embryology (MCQs: 292) | 431 |
| 15. Microbiology (MCQs: 643) | 452 |
| 16. Pharmacology (MCQs: 899) | 500 |
| 17. Immunology (MCQs: 287) | 563 |
| 18. Biochemistry (MCQs: 226) | 585 |
| 19. Biostatistics (MCQs: 95) | 601 |
| 20. Medical Ethics (MCQs: 58) | 608 |
| Total MCQs: 8156 | |

1. ANATOMY

(UPPER LIMB)

1. Following breast surgery, what is the most common complication involving the upper limb?

- Axillary nerve injury
- Long thoracic nerve injury
- Dorsal scapular nerve injury
- Upper limb lymphedema
- Intercostobrachial nerve injury

Correct Answer: d

Radical Mastectomy is a more extensive procedure that involves the removal of the entire breast, underlying muscles and lymph nodes. Modified Radical Mastectomy removes the breast tissue with lymph nodes but preserves the chest wall muscles, resulting in a better cosmetic outcome and preservation of chest wall function. Most common complications of mastectomy are:

- Upper limb lymphedema is the most common complication after breast surgery, particularly following mastectomy or axillary lymph node dissection. It results from the disruption of lymphatic drainage, leading to fluid accumulation in the arm.
- Long thoracic nerve (serratus anterior muscle paralysis) resulting winging of scapula and weakness in abduction of the arm above 90°.
- The thoracodorsal nerve (latissimus dorsi muscle) resulting in difficulty of swimming, climbing, crawling and scratching on back.
- The intercostobrachial nerve (sensory) usually damaged during mastectomy, resulting in numbness of the skin of the medial arm.

2. Difficulty in initiating abduction of the arm is commonly associated with injury to which muscle?

- Deltoid
- Supraspinatus
- Infraspinatus
- Subscapularis
- Teres minor

Correct Answer: b

Abductors of Shoulder Joint

- 0°-15°(initial)→ Supraspinatus muscle (suprascapular nerve)
- 15°-110°→ Deltoid muscle (axillary nerve)
- 110°-180°→ Trapezius (accessory nerve CNXI) and Serratus anterior (long thoracic nerve)

3. Which ligament is damaged due to fall on shoulder after RTA resulting in displacement of lateral end of the clavicle onto the superior aspect of the acromion?

- Coaracoacromial ligament
- Coracoclavicular ligament
- Costoclavicular ligament
- Manubrosternal ligament
- Sternoclavicular ligament

Correct Answer: b

Lateral end of clavicle

- A shoulder separation refers to an injury to the acromioclavicular (AC) joint, and it often involves damage to the coracoclavicular ligament (comprising the trapezoid and conoid ligaments). This ligament is crucial for stabilizing the clavicle relative to the

scapula.

- The coracoclavicular ligament forms an arch over the shoulder joint but does not stabilize the clavicle.

Medial end of clavicle

- The costoclavicular ligament plays a key role in stabilizing the clavicle at its medial end, particularly at the sternoclavicular joint. It connects the inferior surface of the medial clavicle to the first rib, preventing excessive upward displacement of the clavicle and stabilizing it during movements.
- The sternoclavicular ligament helps stabilize the sternoclavicular joint but works in conjunction with the costoclavicular ligament.

4. Which ligament is primarily involved in the stabilization of a medial clavicular fracture?

- Coracoclavicular ligament
- Costoclavicular ligament
- Acromioclavicular ligament
- Sternoclavicular ligament
- Interclavicular ligament

Correct Answer: d

Stabilization of lateral end of clavicle → Coracoclavicular ligament

Stabilization of medial end of clavicle → Costoclavicular ligament > Sternoclavicular

5. In a surgical neck of humerus fracture, which nerve is commonly involved?

- Radial nerve
- Median nerve
- Ulnar nerve
- Axillary nerve
- Musculocutaneous nerve

Correct Answer: d

Sites of potential injury to major nerves in fractures of the humerus:

- Surgical neck: Axillary nerve and Posterior humeral circumflex artery
- Midshaft (radial groove): Radial nerve and Profunda brachii artery
- Supracondylar: Brachial artery and Median nerve
- Medial epicondyle: Ulnar nerve

6. Which nerve primarily supplies the latissimus dorsi muscle?

- Thoracodorsal nerve
- Radial nerve
- Axillary nerve
- Long thoracic nerve
- Musculocutaneous nerve

Correct Answer: a

The thoracodorsal nerve (C6, C7, C8) primarily innervates the latissimus dorsi muscle. This nerve branches from the posterior cord of the brachial plexus and plays a key role in the muscle's function, which includes actions such as extension, adduction, and internal rotation of the shoulder.

- Long thoracic nerve → Serratus anterior
- Thoracodorsal nerve → Latissimus dorsi
- Axillary nerve → Deltoid and Teres minor
- The suprascapular nerve → Supraspinatus and Infraspinatus

7. Which pathway facilitates breast cancer metastasis to the liver, peritoneum, and phrenic nerve?

- Lymphatic vessels
- Arterial connections
- Venous connections
- Nervous system

4

- e. Muscular connections

Correct Answer: c

Breast cancer metastasis to the liver, peritoneum, and phrenic nerve is primarily facilitated through venous connections. The breast drains its venous blood primarily via the internal thoracic vein and the intercostal veins, which eventually connect to the azygous system and then to the inferior vena cava.

Remember!

- Lymphatic vessels are crucial for lymphatic spread and metastasis but are more commonly associated with regional lymph node involvement.
- Venous drainage can create a pathway for cancer cells to spread to distant organs such as the vertebral column, liver and peritoneum.

8. **Which muscles are primarily supplied by the dorsal rami of cervical nerves?**

- Flexors of the trunk
- Flexors of the upper limb
- Extensors of the upper limb
- Extensors of the trunk
- Flexors of the lower limb

Correct Answer: d

The **dorsal rami** of the cervical nerves primarily supply the **extensors of the trunk**, including the intrinsic muscles of the back (such as the erector spinae and transversospinalis groups). These muscles are responsible for maintaining posture and extending the vertebral column.

The **flexors of the trunk** are primarily innervated by the **ventral rami** of the spinal nerves.

9. **All small muscles of hand are supplied by:**

- Radial nerve
- Ulnar nerve
- Median nerve
- Axillary nerve
- Rami of T1

Correct Answer: b

The ulnar nerve primarily supplies the majority of the small muscles of the hand, particularly the intrinsic muscles, which include:

- Most of the interossei muscles (dorsal and palmar)
- The hypothenar muscles
- The adductor pollicis
- The ulnar half of the flexor digitorum profundus

Remember!

The median nerve innervates some intrinsic muscles, including the thenar muscles and the lateral half of the flexor digitorum profundus, but the majority of small muscles in the hand are supplied by the ulnar nerve.

- Small muscles of hand supplied by → Ulnar + Median > Ulnar nerve
- Cannot grip the things → Ulnar + Median > Ulnar > Median nerve
- Cannot hold the pen → Median nerve

10. **If median nerve is damaged superficial to flexor retinaculum what will happen?**

- Loss of opposition of thumb
- Loss of abductor pollicis brevis
- Loss of sensations of proximal middle and index finger
- Loss of sensation on thenar eminence
- Loss of forearm sensation

Correct Answer: d

Clinical effects of damage to the palmar cutaneous branch:

- The palmar cutaneous branch provides sensory innervation to the skin on the central part of the palm. Damage to this branch would result in a loss of sensation in that area, particularly affecting the proximal palm but sparing the fingertips.
- Sensation in the distal fingers (thumb, index, middle, and lateral half of the ring finger) would remain intact because these regions are supplied by the digital branches of the median nerve, which continue deeper under the flexor retinaculum.
- The motor functions of the median nerve (such as thumb opposition and the use of the thenar muscles) would remain intact because these muscles are innervated by the median nerve branches that travel under the flexor retinaculum.

Remember!

- Skin of digits → Deep branch of median nerve
- Skin of thenar eminence → Superficial branch of median nerve
- Thenar muscles → Deep branch of median nerve

11. **A person got stab injury and wound were present on upper arm and floor of axilla. There was loss of sensations over medial aspect of upper arm. Which of following structure will be damage?**

- Axillary nerve
- Radial nerve
- Intercostobrachial nerve
- Ulnar nerve
- Median nerve

Correct Answer: c

Axillary nerve damage: loss of sensory supply to antrolateral aspect of arm (shoulder) and loss of shoulder abduction (paralysis of deltoid).

Intercostobrachial nerve damage: loss of sensory supply to postromedial aspect of arm (shoulder), lateral chest wall and floor of axilla.

Remember!

Stab injury to floor of axilla → Intercostobrachial nerve > Axillary nerve

12. **Thumb flexion is primarily caused by which nerve?**

- Anterior interosseous nerve
- Deep branch of the ulnar nerve
- Superficial branch of the ulnar nerve
- Radial nerve
- Median nerve

Correct Answer: b

Thumb flexion primarily involves the flexor pollicis brevis (mainly) and flexor pollicis longus, which are responsible for flexing the thumb at the interphalangeal joint and the carpometacarpal joint, respectively.

- Flexor pollicis brevis → Deep branch of the ulnar nerve (mainly)
- Flexor pollicis longus → Median nerve

13. **Which one passes below transverse carpal ligament**

- Radial nerve
- Median nerve
- Ulnar nerve
- Axillary nerve
- Musculocutaneous nerve

Correct Answer: b

Above the Transverse Carpal Ligament:

- Radial nerve
- Ulnar nerve and ulnar artery
- Palmar cutaneous branch of median and ulnar nerve

Below the Transverse Carpal Ligament:

- Median nerve
- Flexor tendons (flexor digitorum superficialis, flexor digitorum profundus, flexor pollicis longus)

14. **Which of the following is a fracture of the fifth metacarpal?**

- a. Bennett's fracture
- b. Boxer's fracture
- c. Smith's fracture
- d. Colles' fracture
- e. None of the above

Correct Answer: b

Bennett fracture → 1st metacarpal Fx

Boxer Fracture → 5th metacarpal Fx

15. **A patient present with weakness in elbow flexion and forearm supination, accompanied by sensory loss on the lateral side of the forearm. Which nerve injury is most likely responsible for these symptoms?**

- a. Radial nerve
- b. Median nerve
- c. Ulnar nerve
- d. Musculocutaneous nerve
- e. Axillary nerve

Correct Answer: d

The musculocutaneous nerve innervates the muscles primarily responsible for elbow flexion and forearm supination (biceps brachii and brachialis). It also provides sensory innervation to the lateral forearm via the lateral cutaneous nerve of the forearm.

- Injury to the musculocutaneous nerve would result in both weakness of elbow flexion and supination (due to loss of biceps and brachialis function) and sensory loss on the lateral aspect of the forearm.

16. **Posterior and anterior humeral artery are branches of**

- a. Brachial artery
- b. Subclavian artery
- c. Axillary artery
- d. Carotid artery
- e. Intercostal artery

Correct Answer: c

The axillary artery is divided into three parts based on its location in relation to the pectoralis minor muscle. Each part gives off specific branches:

1. **First Part (proximal to the pectoralis minor):**
 - Superior Thoracic Artery: Supplies the upper thoracic wall.
2. **Second Part (posterior to the pectoralis minor):**
 - Thoracoacromial Artery: Divides into clavicular, acromial, pectoral, and deltoid branches.
 - Lateral Thoracic Artery: Supplies the lateral chest wall and breast.
3. **Third Part (distal to the pectoralis minor):**
 - Subscapular Artery: Splits into circumflex scapular and thoracodorsal branches.
 - Anterior and Posterior Humeral Circumflex Arteries: Supply the shoulder joint and deltoid region.

17. **Which of the following structures is located most medially in the cubital fossa?**

- a. Median nerve
- b. Bifurcation of the brachial artery
- c. Biceps tendon
- d. Radial nerve
- e. Ulnar nerve

Correct Answer: a

Cubital fossa contents (From medial to lateral): MBRR

Median nerve, Brachial artery, Biceps tendon, Radial nerve

18. **Which muscle is attached by aponeurosis?**

- a. Palmaris longus
- b. Flexor pollicis longus
- c. Orbicularis oculi
- d. Gastrocnemius
- e. Orbicularis

Correct Answer: a

Palmaris longus tendon passes superficially to the flexor retinaculum and upon reaching the palm, its tendon contributes to the formation of the palmar aponeurosis, which provides support and anchorage for the skin and underlying structures of the palm.

19. **A patient present with a history of tingling sensations in the hand, inability to grip objects properly, and noticeable wasting of the thenar muscles. Which nerve is most likely involved?**

- a. Ulnar
- b. Median
- c. Radial
- d. Musculocutaneous
- e. Axillary

Correct Answer: b

Median Nerve Neuropathy

Damage at wrist: Carpal tunnel syndrome

- Paralysis and wasting of thenar eminence muscles and opponens pollicis (ape hand deformity and loss of opposition)
- Sensory loss to palmar aspect of lateral (radial) 3 ½ fingers

Damage at elbow, as above plus:

- Unable to pronate forearm
- Weak wrist flexion
- Ulnar deviation of wrist

20. **A patient present with loss of finger extension and abduction following an injury to the left elbow. Which nerve is most likely damaged?**

- a. Posterior interosseous nerve
- b. Anterior interosseous nerve
- c. Ulnar nerve
- d. Median nerve
- e. Radial nerve

Correct Answer: a

The posterior interosseous nerve (a branch of the radial nerve) innervates the extensor muscles of the fingers and wrist. Damage to this nerve can lead to loss of finger extension and weakness in abduction of the fingers, as well as difficulty extending the wrist. The posterior interosseous nerve is particularly vulnerable to injury near the elbow, especially with fractures or trauma around the radial head.

21. **A 10-year-old boy presents to the outpatient department with an injury to the anatomical snuff box. Lesion of which of the following structures is most likely to occur?**

- a. Ulnar nerve
- b. Radial artery
- c. Ulnar artery
- d. Radial nerve
- e. Median nerve

Correct Answer: b

The anatomical snuff box is a triangular depression on the lateral aspect of the wrist, bordered by the tendons of the abductor pollicis longus and extensor pollicis brevis on one side, and the exten-

6

or pollicis longus on the other. An injury to the anatomical snuff box may lead to:

- Radial artery damage, potentially compromising blood flow to the hand.
- Scaphoid fracture, which can cause pain and tenderness in the snuff box area.

The main contents of the anatomical snuffbox radial artery, superficial branch of the radial nerve, and cephalic vein.

22. **Which of the following is the deepest and most anterior structure in the popliteal fossa?**

- Popliteal artery
- Popliteal vein
- Tibial nerve
- Common peroneal nerve

Correct Answer: a

In the popliteal fossa, the structures are arranged from deep to superficial:

Popliteal artery, popliteal vein, and then the tibial nerve and common peroneal nerve.

The popliteal artery is the deepest and most anterior structure, lying directly against the femur in this region. This positioning protects the artery but also makes it susceptible to injury in deep posterior knee trauma.

23. **The axillary sheath is a continuation of which fascia?**

- Pre-tracheal Fascia
- Pre-vertebral Fascia
- Carotid Sheath
- Renal Fascia
- None of above

Correct Answer: b

The axillary sheath is a sleeve of connective tissue that surrounds the axillary artery, vein, and brachial plexus as they pass through the axilla.

It is a continuation of the pre-vertebral fascia, which extends laterally from the cervical spine and encloses these neurovascular structures as they enter the axillary region.

- Pre-tracheal fascia: Located in the anterior neck, primarily surrounding the trachea and thyroid gland.
- Carotid sheath: Encloses the common carotid artery, internal jugular vein, and vagus nerve in the neck.
- Renal fascia: Surrounds the kidneys and adrenal glands in the retroperitoneal space.

24. **The deep plantar artery is a branch of which of the following?**

- Popliteal artery
- Peroneal artery
- Posterior interosseous artery
- Anterior interosseous artery
- Dorsalis pedis artery

Correct Answer: e

1) The dorsalis pedis artery begins in front of the ankle joint midway between the malleoli and is a continuation of the anterior tibial artery. The dorsalis pedis artery ends as deep plantar artery, enter the hole through the proximal part of the space between the first and second metatarsal bones. Having passed between the two heads of the first dorsal interosseous muscle, it joins the lateral plantar artery and completes the plantar arch.

2) The posterior tibial artery arises at the bifurcation of the popliteal artery in the popliteal fossa. The artery terminates behind the medial malleolus by dividing into the medial and the lateral plantar arteries.

- Medial Plantar Artery: The medial plantar artery is the smaller of

the terminal branches of the posterior tibial artery.

- Lateral Plantar Artery: The lateral plantar artery is the larger of the terminal branches of the posterior tibial artery. It runs with the lateral plantar nerve, and it ends by curving medially to form the plantar arch through anastomosis with the dorsalis pedis artery.

Planter Arch

- The foot has one primary arterial plantar arch.
- It lies deep to the plantar aponeurosis and superficial to the long tendons.
- It travels across the metatarsal bases and gives off plantar metatarsal arteries.

It's formed by the union of two main arteries:

- Lateral Plantar Artery (branch of posterior tibial artery)
- Deep Plantar Artery (branch of dorsalis pedis artery)

25. **Which muscles are supplied by the posterior interosseous nerve?**

- Biceps Brachi
- Triceps Brachi
- Anconcus
- Supinator
- All of above

Correct Answer: d

The posterior interosseous nerve (PIN) is a pure motor branch of the radial nerve that arises in the forearm. It primarily supplies the extensor muscles of the forearm including supinator, with exception, the brachioradialis (a flexor).

- Supinator (forearm supination)
- Extensor carpi radialis brevis (wrist radial deviation)
- Extensor digitorum (finger extension)
- Extensor digiti minimi (little finger extension)
- Extensor carpi ulnaris (wrist ulnar deviation)
- Abductor pollicis longus (thumb abduction)
- Extensor pollicis brevis (thumb extension)
- Extensor pollicis longus (thumb extension)
- Extensor indicis (index finger extension)

The anterior interosseous nerve (AIN) is a pure motor branch of the radial nerve that arises in the forearm. It primarily supplies the flexor muscles of forearm including pronator quadratus.

- Flexor pollicis longus (thumb flexion)
- Flexor digitorum profundus (index and middle finger flexion at distal interphalangeal joints)
- Pronator quadratus (forearm pronation)

OK sign: A person with a healthy AIN can easily make the "OK" sign by touching the tip of their thumb to the tip of their index finger while keeping the other fingers straight. This action requires the coordinated function of the flexor pollicis longus (FPL) and flexor digitorum profundus (FDP) muscles, both of which are innervated by the AIN (branch of median nerve).

Pincer movements: The pincer movement is a delicate action that involves bringing the thumb and index finger together to grasp or pick up small objects. It's a fundamental skill for many daily activities like: Picking up small objects (coins or seeds), buttoning clothes, or holding a pen.

Remember!

- PIN (radial) Injury: Difficulty extending the wrist and fingers, weakness in supination, and a characteristic "wrist drop" deformity.
- AIN (median) Injury: Difficulty flexing the thumb and index/middle fingers, weakness in pronation, and an inability to perform pincer movement or "OK" sign.
- Pronator teres (pronation): Median nerve
- Pronator quadratus (pronation): AIN (Median nerve)
- Supinator (supination): PIN (Radial nerve)
- Biceps (supination): Musculocutaneous nerve

26. A patient is asked to grip a card between the tip of the index finger and the thumb. This test is used to assess the injury of which nerve?
- Anterior interosseous nerve
 - Posterior interosseous nerve
 - Ulnar nerve
 - Radial nerve
 - Axillary nerve

Correct Answer: c

Froment's sign is a physical examination maneuver used to assess the function of the adductor pollicis muscle, which is primarily innervated by the ulnar nerve.

- The examiner asks the patient to grip a piece of paper between the thumb and index finger.
- The examiner then attempts to pull the paper away from the patient's grip.

Abnormal Response (Froment's Sign): If the ulnar nerve is damaged, the adductor pollicis muscle will be weak or paralyzed. To compensate for this weakness, the patient will use the flexor pollicis longus muscle, which is innervated by the median nerve. This muscle flexes the thumb's interphalangeal joint, causing it to bend towards the palm. This is Froment's sign.

27. Claw hand produced by unopposed action of
- Flexor digitorum longus and flexor digitorum profundus
 - Extensor digitorum longus and extensor digitorum indices
 - Extensor digitorum and flexor digitorum profundus
 - Extensor digitorum and flexor digitorum superficialis and profundus
 - All

Correct Answer: c

Claw hand is primarily due to the loss of intrinsic muscles (lumbricals and interossei), resulting in an imbalance with the extrinsic flexors and extensors. This leads to the characteristic deformity of hyperextension at the MCP joints and flexion at the PIP and DIP joints.

Key Muscle Impairments in Claw Hand:

i. Lumbricals

- Function: Flexion at the MCP joints and extension at PIP and DIP joints.
- Innervation: Median nerve (Lateral two) and Ulnar nerve (Medial two)
- Effect of Impairment: Hyperextension at the MCP joints and flexion at the PIP and DIP joints (claw hand).

ii. Interossei

- Function: Assist in MCP joint flexion and PIP/DIP joint extension.
- Innervation: Ulnar nerve (All interossei)
- Effect of Impairment: Contributes to clawing deformity

Extrinsic Muscle Imbalance

The deformity is exacerbated by the unopposed action of the following extrinsic muscles:

- Extensor Digitorum:** Causes hyperextension at the MCP joints.
- Flexor Digitorum Superficialis and Profundus:**
- Cause flexion at the PIP and DIP joints.

Remember!

- Complete claw hand** (affects all fingers) due to **Median and Ulnar** nerve injury (**Upper brachial trunk injury**- Klumpke paralysis)
- Incomplete claw hand** (affects 4th and 5th fingers) due to **Ulnar** nerve injury (Guyon canal stenosis)

28. Peau d'orange appearance of the breast occurs due to:
- Arterial obstruction
 - Venous obstruction
 - Lymphatic obstruction
 - Lymphatic and Venous obstruction
 - Local tumor invasion

Correct Answer: c

The most common cause of **peau d'orange** (orange peel) in the breast is **inflammatory breast cancer**. In this aggressive form of breast cancer, **cancer cells block the lymphatic vessels** in the skin of the breast. This blockage prevents lymphatic fluid from draining properly, leading to fluid buildup beneath the skin. As the fluid accumulates, it pushes up against the skin, causing it to dimple and thicken.

- Lymphatic obstruction** in the dermis occurs due to infiltration by malignant cells, leading to dermal edema.
- This swelling causes the skin to stretch while the **Cooper's ligaments** remain tethered to the breast tissue, creating the characteristic dimpling pattern.

29. A patient falls on an outstretched hand and sustains trauma to the wrist. The lower portion of the joint is displaced posteriorly and medially. What is the most likely diagnosis?
- Fracture of neck of scaphoid bone
 - Fracture of lunate
 - Colle's Fracture
 - Fracture of ulna
 - Fracture of metacarpal bone

Correct Answer: c

Colles Fracture

- Distal radius Fx
- Fall on the outstretched hand (forceful extension)
- Distal fragment is displaced DORSALLY- dinner fork deformity

Smith Fracture:

- Distal radius Fx
- Fall on flexed hand (forceful flexion)
- Distal fragment is displaced ANTERIORLY- garden spade deformity

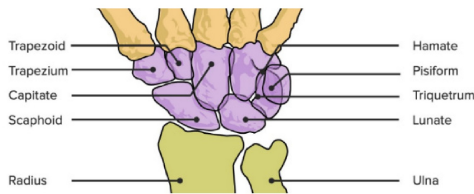
Galeazzi Fracture:

- Distal radius Fx with dislocation of distal radioulnar joint
- Fall or trauma with rotational force
- Fracture of necessity because it almost always requires surgical intervention for optimal healing and function.

30. A person who is unable to button and hold pen due to damage of which muscle
- Abductor pollicis
 - Abductor digiti
 - Opponens pollicis
 - Adductor digiti minimi
 - Flexor pollicis

Correct Answer: c

The **opponens pollicis** muscle is responsible for the movement known as **thumb opposition**, which allows the thumb to touch the tips of the other fingers (such as when pinching or holding objects like a pen). Damage to this muscle impairs the ability to perform fine motor tasks, including **buttoning** and **holding a pen**.



31. Which is the middle carpal bone in the proximal row?

- Trapezium
- Lunate
- Capitate
- Scaphoid
- Triquetrum

Correct Answer: b

Carpal bones the lateral (thumb side) to the medial side

- **She Is To Preety** (Proximal row): Scaphoid, Lunate, Triquetrum, Pisiform
- **Try To Catch Her** (Distal row): Trapezium, Trapezoid, Capitate, Hamate

Carpal bones characteristics:

- The scaphoid is the largest bone in the proximal row of carpal bones and is also the most commonly fractured. It often occurs due to a fall on an outstretched hand. As a result of the poor blood supply to the scaphoid, fractures can be slow to heal and avascular necrosis of the proximal fragment of the scaphoid can occur.
- Lunate ("moon-shaped") articulating proximally with the radius.
- The lunate bone is the most frequently dislocated carpal bone.
- Triquetrum ("three-cornered") is a pyramidal bone.
- Pisiform ("pea-shaped") is a small round sesamoid bone found in the tendon of the flexor carpi ulnaris.
- The trapezium has a distinct tubercle on the palmar surface which projects anteriorly.
- The trapezoid ("resembles a table") is a wedge-shaped bone.
- The trapezoid is the smallest bone in the distal row of carpal bones.
- The trapezoid is the least commonly fractured carpal bone.
- Capitate ("head-shaped") is a head-shaped bone.
- The capitate is the largest carpal bone
- Hamate ("hooked bone") is a wedge-shaped bone.
- The hamate is easily distinguishable due to its shape and a hook-like process that extends towards the palmar surface.
- In a similar fashion to the scaphoid, the hook of the hamate is vulnerable to avascular necrosis due to its poor blood supply.

32. After trauma on anatomical snuff box patient having bleed and pain due to which structure damaged?

- Median nerve
- Ulnar nerve
- Radial artery
- Radial nerve
- Brachial artery

Correct Answer: c

Most common carpal bone **fracture** → **Scaphoid**

Most common **dislocated** carpal Bone → **Lunate**

Fracture of hook of **hamate** → **Ulnar** nerve damage

33. A patient is unable to abduct and adduct their fingers. Damage to which of the following nerves is most likely responsible?

- Ulnar nerve
- Median nerve
- Radial nerve
- Axillary nerve
- Musculocutaneous nerve

Correct Answer: a

Abduction and adduction of the fingers are primarily controlled by the interossei muscles, which are innervated by deep branch of the ulnar nerve.

- The palmar interossei adduct the fingers (PAD: Palmar = ADduction).
- The dorsal interossei abduct the fingers (DAB: Dorsal = ABduction).

34. The peau d'orange appearance of the breast in malignancy occurs due to distortion of which structure?

- Suspensory ligaments of the breast
- Longitudinal ligament of the breast
- Lobules of the breast
- Lymphatics of the breast
- Subcutaneous fat

Correct Answer: a

- Breast **cancer cells** infiltrate and block the **lymphatic** vessels in the dermis of breast.
- This causes **lymphatic stasis**, resulting in **swelling** of the skin.
- The swelling accentuates the natural attachment of the skin to the underlying **suspensory ligaments** (Cooper's ligaments), causing dimpling.
- The thickened, edematous skin resembles the surface of an orange (peau d'orange).

Remember!

- Peau d'orange appearance is due to → Cancer cell infiltration of superficial lymphatics of breast skin.
- Dimpling of skin in Peau d'orange appearance due to distortion of → Suspensory ligaments (Cooper's ligaments) of breast.

35. 11-year-old girl was sent to radiologist for x-ray elbow joint to diagnose the age. The secondary centre of ossification last to appear in her humerus is due to

- Medial epicondyle
- Lateral epicondyle
- Trochlea
- Capitulum
- Radius

Correct Answer: b

Humerus ossification at various ages: **CRITOL= 1357911** (years)

- Capitulum → **1** year
- Radius head → **3** year
- Internal (medial epicondyle) → **5** year
- Trochlea → **7** year
- Olecranon process → **9** year
- Lateral epicondyle → **11** year

36. Breast of adult female lies over?

- Pectoralis major
- Pectoralis minor
- Clavipectoral fascia
- Superior pectoral fascia
- Serratus anterior

Correct Answer: a

The **adult female breast** is located on the anterior thoracic wall and primarily lies over the **pectoralis major muscle**, which forms the majority of the underlying structure. The breast also extends laterally and may partially overlie the **serratus anterior** and **external oblique muscles**, but its primary support is derived from the pectoralis major.

The breast is separated from the pectoralis major by the retro-mammary space, a layer of loose connective tissue, allowing some mobility of the breast over the chest wall.

The breast tissue is supported by Cooper's ligaments (suspensory ligaments), which attach to the dermis of the skin and provide structural integrity.

37. **Palpable lymph nodes in the pectoral part of the axillary nodes are most likely associated with cancer originating in which region of the breast?**
- Upper outer quadrant of the breast
 - Medial quadrant of the breast
 - Lower inner quadrant of the breast
 - Areolar region of the breast
 - Whole breast

Correct Answer: a

The upper outer quadrant of the breast is the most common site of breast cancer due to its proximity to the axillary tail of Spence, which extends into the axilla and has a rich lymphatic drainage. This region contains a dense concentration of glandular tissue, increasing its susceptibility to malignancies. Lymphatic drainage from this quadrant primarily involves the anterior (pectoral) group of axillary lymph nodes, making these nodes palpable in many cases of breast cancer.

Lymphatic drainage of breast

- Lateral, superior, inferior quadrants and nipple → Anterior (Pectoral) axillary Lymph Nodes (75%).
- Medial quadrants of breast → Internal Thoracic (Parasternal) Lymph Nodes (20%).
- Nipple drainage → Anterior (pectoral) axillary lymph nodes
- Tail of breast → Posterior (scapular) lymph node
- Anterior (Pectoral) drains → Lateral group → Central group

38. **Most useful technique used in screening of breast cancer is?**
- Self-breast examination
 - Ultrasound of breast
 - Mammography
 - CT scan
 - MRI

Correct Answer: c

Mammography:

- Detects microcalcifications and other subtle changes suggestive of malignancy.
- High sensitivity for detecting early-stage breast cancers, especially in women aged 50–74 years.
- Allows identification of abnormalities that may not be palpable during physical examination.
- Less effective in younger women with dense breast tissue (where ultrasound may complement).

Self-breast examination: While useful for awareness and detecting palpable lumps, it is not as reliable or systematic as mammography for early detection.

Ultrasound of the breast: Primarily used as a diagnostic adjunct to mammography, especially in women with dense breasts or to evaluate specific findings. Not recommended as the primary screening tool.

39. **Which nerve is involved if medial collateral ligament damage at the elbow?**
- Median nerve
 - Radial nerve
 - Ulnar nerve
 - Axillary nerve
 - Musculocutaneous nerve

Correct Answer: c

The ulnar nerve passes posterior to the medial epicondyle of the humerus, where it is superficial and vulnerable to injury or compression. The **medial collateral ligament (MCL)** of the elbow, also known as the **ulnar collateral ligament (UCL)**, provides stability to the medial side of the elbow joint. Ulnar nerve lies close to the MCL, making it susceptible to damage during ligament injury or surgical repair.

40. **An elderly woman presents with bluish discoloration of the hand upon cold exposure. She is not having any co morbidity. What is the most likely cause?**
- Primary Raynaud phenomenon
 - Secondary Raynaud phenomenon
 - Sclerosis
 - Cervical rib
 - Hypercalcemia

Correct Answer: b

Raynaud phenomenon is characterized by episodic vasospasm of the arteries and arterioles in the extremities, often triggered by **cold exposure** or **stress**. It leads to a **triphasic color change** in the affected areas:

- Pallor (white): Due to ischemia from vasospasm.
- Cyanosis (blue): Due to deoxygenated blood pooling.
- Rubor (red): Upon rewarming, blood flow returns.

Primary Raynaud Phenomenon:

- Occurs without any associated systemic disease.
- Common in young adults but can present in older adults.
- The condition is benign and typically does not progress to tissue damage.

Secondary Raynaud Phenomenon:

- Associated with underlying conditions like scleroderma, lupus, or rheumatoid arthritis.

41. **What is the medial attachment of the flexor retinaculum?**
- Distal ulna
 - Pisiform
 - Proximal radius
 - Scaphoid bone
 - Lunate

Correct Answer: b

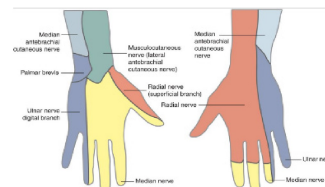
The flexor retinaculum (the transverse carpal ligament). It has medial and lateral attachments:

Medial attachment:

- Pisiform bone (a sesamoid bone in the proximal row of the carpus)
- Hook of the hamate (another medial carpal bone)

Lateral attachment:

- Scaphoid bone (specifically, the tubercle of the scaphoid)
- Trapezium bone (specifically, the crest of the trapezium)



42. **Regarding the radial nerve sensory supply, which area does it innervate?**
- Dorsum of the lateral three and a half fingers excluding fingertips
 - Dorsum of the hand including fingertips
 - Palmar area of the hand
 - Medial two fingers (palmar and dorsal)
 - Lateral two and half fingers (palmar and dorsal)

Correct Answer: a

Median nerve: Supplies the **lateral half of the palm** and **lateral 3 ½ fingers** including the distal half of these fingers dorsally.

Ulnar nerve: Supplies the **medial half of the palm** and **medial 1 ½ fingers** both on the **palmar and dorsal sides** including **fingertips**.

Radial nerve: Provides sensory innervation to the **dorsum of the hand** and the **dorsal surface of the lateral three and a half fingers** (excluding the fingertips).

43. **A female with complains of wrist pain & numbness in index & ring finger. The movement of which hand muscle will likely be affected:**

- Adductor pollicis longus
- Abductor pollicis brevis
- Extensor pollicis brevis
- Abductor pollicis longus
- Opponens digiti minimi

Correct Answer: b

Carpal tunnel syndrome is characterized numbness, tingling, or burning in the **thumb, index finger, middle finger, and half of the ring finger**, weakness in the hand, making it difficult to grip objects due to compression of median nerve.

Causes:

- Repetitive motions that involve flexing the wrist, such as typing, using a keyboard, or playing musical instruments
- Medical conditions such as diabetes, arthritis, or pregnancy
- Fluid retention
- Injury to the wrist

The **median nerve** provides motor innervation to the **thenar muscles**, including the **abductor pollicis brevis**

44. **The nerve supply to the opponens pollicis muscle is:**

- Radial nerve
- Ulnar nerve
- Median nerve
- Axillary nerve
- Musculocutaneous

Correct Answer: c

The opponens pollicis is innervated by the **recurrent branch of the median nerve**, which supplies most of the **thenar muscles except the adductor pollicis and the deep head of the flexor pollicis brevis** (which are innervated by the **ulnar nerve**). The median nerve is responsible for innervating the following muscles in the **thenar eminence**:

- Abductor pollicis brevis
- Flexor pollicis brevis (superficial head)
- Opponens pollicis

45. **The pectoralis major muscle flap receives its blood supply from which of the following arteries?**

- Intercostal arteries
- Thoracoacromial artery
- Axillary artery
- Thoracodorsal artery
- Internal thoracic artery

Correct Answer: b

The **pectoralis major muscle flap** is commonly used in reconstructive surgery, particularly for head, neck, and chest wall defects. Its vascular supply is derived from the **thoracoacromial artery**, which is a branch of the **axillary artery**.

46. **A patient has lost the ability to supinate the forearm. Which of the following nerve injuries is most likely responsible for this loss?**

- Median nerve
- Ulnar nerve
- Musculocutaneous and median nerve
- Radial and musculocutaneous nerve
- Axillary nerve

Correct Answer: d

- Supination → Musculocutaneous nerve (Biceps brachii) and radial nerve (Supinator)
- Pronation → Median nerve (Pronator teres and Pronator quadratus)

The pronator quadratus is innervated by the anterior interosseous nerve, which is a branch of the median nerve.

47. **A deep injury to the radial groove of the humerus will result in impairment of which movement?**

- Abduction of fingers
- Loss of sensation on the ventral part of the lower thumb
- Loss of extension of the wrist resulting in wrist drop
- Flexion of the wrist
- Extension of the fingers

Correct Answer: d

The radial nerve runs along the radial groove of the humerus and supplies the muscles responsible for wrist and finger extension. A deep injury in this area can damage the radial nerve, leading to wrist drop, which is characterized by an inability to extend the wrist and fingers.

48. **The deep plantar artery is a branch of which of the following arteries?**

- Popliteal artery
- Peroneal artery
- Posterior interosseous artery
- Anterior interosseous artery
- Dorsalis pedis artery

Correct Answer: e

The **deep plantar artery** is a branch of the **dorsalis pedis artery**, which is the continuation of the **anterior tibial artery** after it crosses the ankle joint.

The **lateral and medial plantar arteries** arise from the **posterior tibial artery** as it passes beneath the flexor retinaculum. The **lateral plantar artery** contributes significantly to the **deep plantar arch**, while the medial plantar artery supplies the medial structures of the sole and the great toe.

49. **If the supinator muscle is paralyzed, which muscle can still perform supination of the forearm?**

- Brachioradialis
- Brachialis
- Anconeus
- Biceps brachii
- Pronator

Correct Answer: d

The **biceps brachii** is the primary **supinator** of the forearm, especially when the **elbow is flexed**. It is much stronger than the supinator muscle in performing this action. If the supinator is paralyzed, the biceps brachii can effectively take over the role of supination.

50. **The breast is divided into how many groups based on its lymphatic drainage?**

- Medial and Lateral
- Superior and Anterior
- Posterior and Lateral
- Anterior and Inferior
- Quadrants

Correct Answer: a

The lymphatic drainage of the breast is primarily divided into two regions:

- Medial portion: Drains to the internal mammary (parasternal) lymph nodes located along the internal thoracic vessels.