

CHOOSE THE SINGLE BEST ANSWER FOR QUESTIONS 1 - 42.

1. Which of the following muscles is NOT supplied by the median nerve or one of its branches:
 - A. Flexor pollicis brevis
 - B. Opponens pollicis
 - C. Flexor pollicis longus
 - D. 1st and 2nd lumbricals
 - E. Adductor pollicis

2. Which of the following is INCORRECT regarding the erector spinae muscle:
 - A. The muscle extends from the sacrum to the base of the skull
 - B. The muscle is invested by two layers of the thoracolumbar fascia
 - C. The major action of the muscle is to extend the vertebral column
 - D. The erector spinae muscle is arranged in three vertical columns: rotatores; semispinalis; and multifidus
 - E. The muscle is innervated by the dorsal rami of spinal nerves

3. Choose the INCORRECT statement regarding joints of the wrist and hand.
 - A. The greatest part of wrist flexion occurs at the mid-carpal joint.
 - B. The lumbrical tendons pass anterior to the deep transverse metacarpal ligaments.
 - C. The ulnar collateral ligament joins the styloid process of the ulna to the scaphoid bone.
 - D. The thumb has a separate joint cavity at its carpometacarpal articulation.
 - E. The distal surface of the ulna does not articulate with the proximal row of carpal bones.

4. Choose the INCORRECT statement concerning the components of synovial joints:
- A. The synovial membrane does not cover the articular surfaces of a synovial joint.
 - B. Articular cartilage often degenerates with aging or injury
 - C. The fibrous joint capsule is anchored to articular cartilage
 - D. The nerves which innervate the muscles acting upon a joint will also innervate the joint
 - E. Synovial fluid not only lubricates articular surfaces but nourishes the articular cartilage
5. Concerning the autonomic nervous system, all of the following are TRUE EXCEPT:
- A. Splanchnic nerves carry preganglionic fibers
 - B. The white rami communicantes (communicating rami) carry preganglionic sympathetic fibers
 - C. Axons in the white rami communicantes are unmyelinated
 - D. The white rami communicantes arise from spinal nerves T-1 to L-2
 - E. The sympathetic chain ganglia (paravertebral) contain the cell bodies of postganglionic neurons
6. All of the following statements regarding the actions of the interosseous muscles are CORRECT EXCEPT:
- A. They abduct the digits
 - B. They adduct the digits
 - C. They extend at the interphalangeal joints
 - D. They flex at the metacarpophalangeal joints
 - E. They extend at the metacarpophalangeal joints

7. Choose the INCORRECT statement with regard to the dura mater covering the spinal cord:
- A. It is continuous with the meningeal layer of the cranial dura mater
 - B. It adheres closely to the periosteum which lines the vertebral canal
 - C. It ends as a blind sac within the vertebral canal at the level of the second sacral vertebra
 - D. It blends with the epineurium of spinal nerves
 - E. It is provided with a blood supply and nerve supply
8. In a supracondylar fracture of the humerus, the median nerve is completely severed. Which of the following is NOT likely to result from the injury?
- A. The forearm is kept in the supine position
 - B. Wrist flexion is weak
 - C. There is wasting of thenar eminence muscles
 - D. Loss of sensation on the palmar surfaces of the lateral 3 and one-half fingers, and on their nailbeds, dorsally
 - E. When making a fist, the second and third digits flex, while the fourth and fifth digits remain extended
9. Choose the INCORRECT statement regarding the quadrangular space:
- A. The nerve supplying the teres major muscle passes through it
 - B. The artery passing through it supplies the deltoid muscle
 - C. Severance of the nerve passing through it will result in weakness of upper limb abduction
 - D. The teres minor muscle forms its superior boundary
 - E. The muscle forming its inferior boundary medially rotates the humerus

10. Which of the following statements about the axillary artery or its major branches is INCORRECT:
- A. The thoracoacromial trunk supplies blood to the deltoid muscle
 - B. The second part of the axillary artery lies posterior to the pectoralis minor muscle
 - C. The lateral thoracic artery supplies blood to the breast
 - D. The thoracodorsal artery is the major blood supply to the latissimus dorsi muscle
 - E. The posterior circumflex humeral artery passes through the triangular space
11. All of the following statements regarding the anatomical snuffbox are CORRECT EXCEPT:
- A. The scaphoid and trapezium form its floor
 - B. The tendons of the abductor pollicis longus, extensor pollicis brevis and extensor pollicis longus form its boundaries
 - C. The superficial radial nerve traverses this area
 - D. The radial artery courses across its floor
 - E. The extensor indicis tendon is located lateral to this area
12. One month after a fracture of the surgical neck of the humerus a patient is unable to abduct the humerus beyond 60 degrees. You suspect an injury to the:
- A. Suprascapular nerve
 - B. Musculocutaneous nerve
 - C. Axillary nerve
 - D. Upper subscapular nerve
 - E. Thoracodorsal nerve

13. Each of the following statements concerning the cubital fossa is CORRECT EXCEPT:
- A. Its medial boundary is formed by the pronator teres muscle
 - B. Its roof contains the lateral antebrachial cutaneous nerve
 - C. Its lateral boundary is formed by the brachioradialis muscle
 - D. The median nerve lies lateral to the brachial artery
 - E. The floor is formed by the supinator and brachialis muscles
14. All of the following statements concerning the brachial plexus are TRUE EXCEPT:
- A. The lateral cord of the brachial plexus contains fibers of ventral rami C5, C6 and C7.
 - B. Fibers of ventral rami C8 and T1 are carried in the lower trunk, medial cord and posterior cord of the brachial plexus.
 - C. The suprascapular nerve is a branch of the middle trunk of the brachial plexus.
 - D. A penetrating injury one inch superior to the middle third of the clavicle could damage the trunks of the brachial plexus.
 - E. The medial cord carries fibers which innervate muscles which adduct the digits.
15. The lumbar curvature of the vertebral column becomes obvious:
- A. In early fetal life
 - B. Just before birth
 - C. When the infant begins to hold its head erect
 - D. When a child begins to walk
 - E. At puberty

16. A fracture of the medial epicondyle of the humerus with associated nerve damage could result in all of the following EXCEPT:
- A. Hyperextension of the metacarpophalangeal joints of digits 2-5
 - B. Weakness of flexion at the wrist
 - C. Loss of sensation on the medial side of the palm
 - D. Inability to abduct the 5th digit
 - E. Loss of flexion of the distal phalanx of the 2nd digit
17. In a lesion of the superior (upper) part of the brachial plexus resulting from excessive displacement of the head to the opposite side and depression of the shoulder on the same side, the appearance of the upper limb is characterized as a:
- A. Claw hand
 - B. Waiter's tip hand
 - C. Wrist drop
 - D. Winged scapula
 - E. Ape-like hand
18. Some of the postganglionic sympathetic fibers supplying the lateral palmar skin of the hand (for blood vessels and sweat glands) reach their target areas by coursing within each of the following, EXCEPT:
- A. The upper trunk of the brachial plexus
 - B. The posterior division of the upper trunk of the brachial plexus
 - C. The lateral cord of the brachial plexus
 - D. Gray rami communicantes from the cervicothoracic (stellate) ganglion
 - E. Median nerve

19. A patient complains of pain after a fall on the left shoulder. Examination shows that the lateral end of the clavicle is dislocated to the superior surface of the acromion process. This resulted from injury to the ligament largely responsible for stability of the acromioclavicular joint, NAMELY the:
- A. Glenohumeral ligaments
 - B. Coracoclavicular ligament
 - C. Costoclavicular ligament
 - D. Coracoacromial ligament
 - E. Acromioclavicular ligament
20. A patient undergoes a radical mastectomy in which the breast, pectoralis major and minor muscles, and the entire lymphatic and fascial contents of the axilla are removed. Which of the following structures should be preserved?
- A. Lateral and medial pectoral nerves
 - B. Thoracodorsal and long thoracic nerves
 - C. Pectoral branches of the thoracoacromial artery
 - D. Clavipectoral fascia
 - E. Suspensory ligament of the axilla
21. Which of the following groups of nerves must be severed to denervate all the muscles of the rotator cuff?
- A. Radial, ulnar and median
 - B. Median, suprascapular and thoracodorsal
 - C. Axillary, ulnar and musculocutaneous
 - D. Suprascapular, upper and lower subscapular and axillary
 - E. Radial, long thoracic and median

22. The scaphoid bone articulates with all of the following EXCEPT the:
- A. Lunate
 - B. Hamate
 - C. Trapezium
 - D. Radius
 - E. Capitate
23. Each of the following statements regarding the radial artery is CORRECT EXCEPT:
- A. Compression of the artery against the scaphoid bone can control hemorrhage of the thumb
 - B. It enters the palm of the hand by passing between the two heads of the first dorsal interosseous muscle
 - C. It gives off the princeps pollicis artery
 - D. It mainly forms the superficial palmar arch
 - E. It is related to the floor of the anatomical snuff box
24. All of the following statements regarding lymphatics of the breast and upper limb are CORRECT EXCEPT:
- A. Lymphatic vessels provide a route for the spread of malignant (cancer) cells.
 - B. The deltopectoral nodes receive lymph from the upper limb.
 - C. The apical group of lymph nodes receive most of the lymphatic drainage of the axilla.
 - D. Lymphatic vessels draining the right breast can anastomose with lymphatic vessels draining the left breast.
 - E. The lymphatic vessels of the breast drain directly into the vertebral venous plexus.

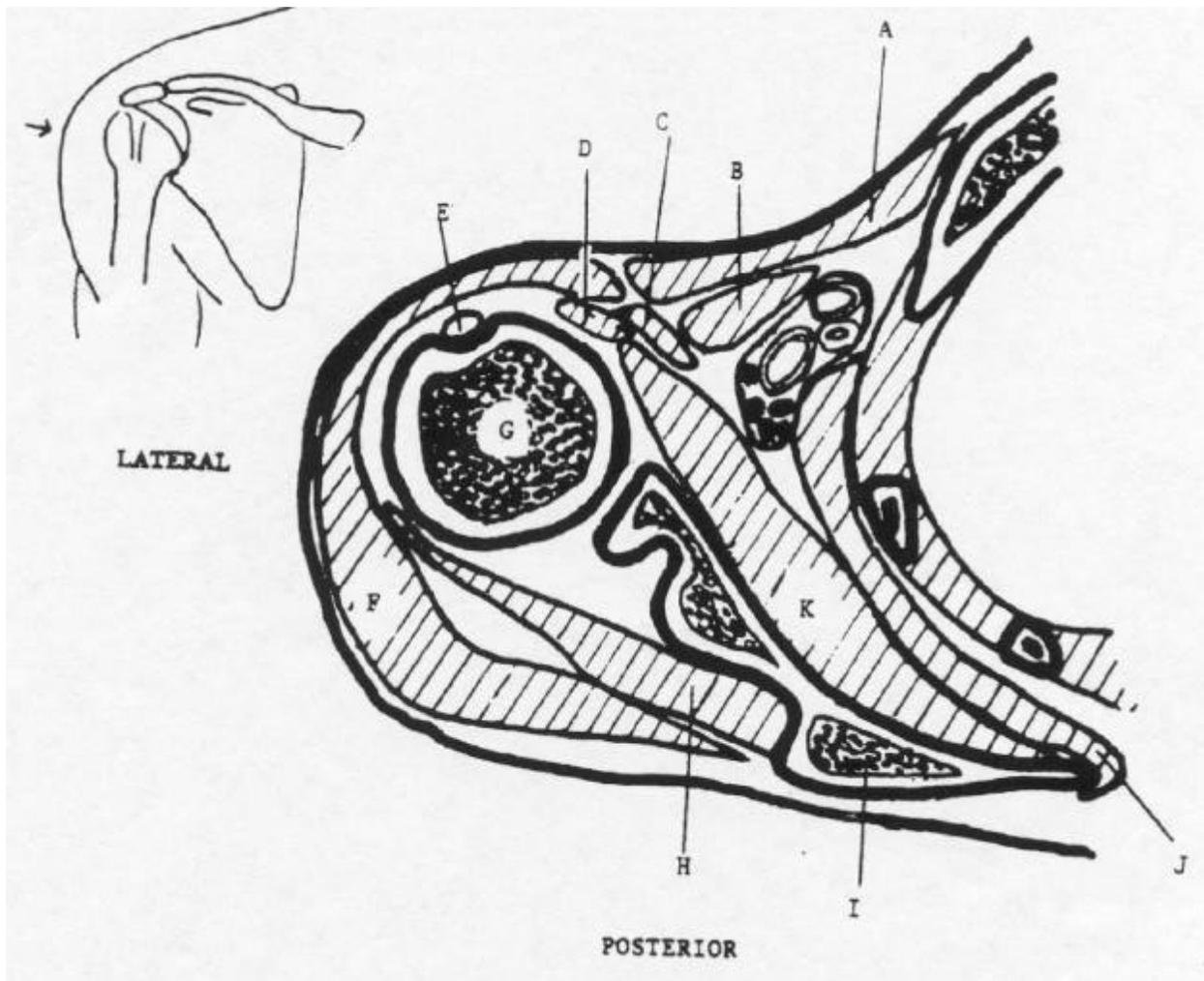
25. Injury to the radial nerve as it lies in the radial groove could result in all of the following functional deficits EXCEPT:
- A. Weakness of supination of the forearm
 - B. Loss of sensation on the dorsum of the hand
 - C. Inability to flex the distal phalanges of digits 2-5
 - D. Wrist drop
 - E. Inability to extend the thumb
26. A tumor in the neck which destroys the left stellate (cervicothoracic) ganglion will:
- A. Block all transmission of painful stimuli from the left upper limb
 - B. Paralyze all voluntary motor activity in the left upper limb
 - C. Result in vasodilation in the left upper limb
 - D. Result in excessive sweating in the left upper limb
 - E. Result in Waiter's tip hand in the left upper limb.
27. Muscles that attach to both the scapula and humerus include all of the following EXCEPT the:
- A. Deltoid
 - B. Teres minor
 - C. Pectoralis major
 - D. Teres major
 - E. Infraspinatus

28. Regarding the breast all of the following are CORRECT EXCEPT:
- A. A major course for lymph drainage from the glandular tissue, areola and nipple is to the axillary lymph nodes.
 - B. The circular smooth muscle fibers of the nipple are innervated by the sympathetic nervous system.
 - C. Its major posterior relationship is the pectoralis major muscle.
 - D. Its principal blood supply is from the thoracodorsal and highest thoracic arteries.
 - E. Deep to the breast there is an area of loose connective tissue named the retromammary space.
29. A patient presents with paralysis of the brachialis muscle. A suspected nerve injury could involve each of the following EXCEPT the:
- A. Upper trunk of the brachial plexus
 - B. Musculocutaneous nerve
 - C. Ventral rami of C5 and C6
 - D. Lateral cord of the brachial plexus
 - E. Lower trunk of the brachial plexus
30. Which one of the following relationships in the forearm is CORRECT:
- A. The radial artery courses medial to the flexor carpi radialis muscle.
 - B. The ulnar nerve courses posterior to the extensor carpi ulnaris muscle.
 - C. The median nerve lies between the flexor digitorum profundus and the flexor pollicis longus muscles.
 - D. The superficial radial nerve courses superficial to the brachioradialis muscle.
 - E. The deep radial nerve courses between the superficial and deep parts of the supinator muscle.

31. Which of the following arteries does not usually participate in the collateral circulation of the elbow?
- A. Ulnar
 - B. Brachial
 - C. Radial
 - D. Profunda brachii
 - E. Anterior interosseous
32. Which one of the following paired items is an INCORRECT description of the structures which contribute to the boundaries of the axilla:
- A. Apex - 1st rib
 - B. Anterior wall - clavipectoral fascia
 - C. Posterior wall - infraspinatus muscle
 - D. Medial wall - serratus anterior muscle
 - E. Floor - axillary fascia
33. The ventral ramus of the spinal nerve at vertebral level C5 would contain all of the following functional components EXCEPT:
- A. Motor fibers to an abductor of the arm at the shoulder
 - B. Sensory fibers from the skin on the medial arm
 - C. Sympathetic fibers to blood vessels
 - D. Motor fibers to a structure bordering the axilla
 - E. Sensory fibers from the skin on the lateral forearm

34. Which of the following structures DOES NOT pass through the carpal tunnel:
- A. Ulnar nerve
 - B. Median nerve
 - C. Flexor pollicis longus tendon
 - D. Flexor digitorum superficialis tendons
 - E. Flexor digitorum profundus tendons
35. At which vertebral level would you expect to find the conus medullaris in the adult:
- A. T11
 - B. L1
 - C. L3
 - D. L5
 - E. S1
36. Which of the following is INCORRECT regarding the trapezius muscle:
- A. Its superior fibers elevate the scapula
 - B. It partially inserts on the clavicle
 - C. It is innervated by the dorsal scapular nerve
 - D. It draws its blood supply from the transverse cervical artery
 - E. Part of its origin is from the skull

The following questions (37-42) pertain to the labeled structures in the accompanying diagram. The small figure in the upper left indicates the level of the transverse section.



37. This structure attaches to the supraglenoid tubercle.
38. This structure is active during the first 120 degree of abduction at the shoulder in the scapular plane.
39. This structure is the primary rotator of the scapula.
40. This structure is innervated by the suprascapular nerve.
41. In addition to "F", this structure receives its innervation through the posterior cord of the brachial plexus.
42. This structure has both clavicular and sternal attachments.