

FOR QUESTIONS 1 THROUGH 24 SELECT THE SINGLE BEST ANSWER - (3 points each)

1. A dermatome is an area of skin innervated by which of the following?

- C
- a single dorsal root
  - a single dorsal ramus
  - a single spinal nerve
  - a single ventral ramus

2. Which of the following ligaments would limit excessive extension of the spine?

- C
- posterior longitudinal ligament
  - supraspinous ligaments
  - anterior longitudinal ligament
  - ligamentum flavum

3. Direct metastasis of tumor cells from a primary site in the pelvis or abdomen to a secondary site in the brain can occur via a plexus of valveless veins located in which of the following?

- A
- epidural space
  - dural sac
  - subdural space
  - subarachnoid space

4. Which of the following functional nerve fiber types conveys motor information to the sweat glands located in the skin over the medial 2/3 of the back?

- D
- somatic afferent
  - visceral afferent
  - somatic efferent
  - visceral efferent

*somatic*      *afferent to CNS*  
*efferent away from CNS*

5. The cell bodies of the motor neurons that innervate the erector spinae muscle are located in the...

- B
- brain.
  - spinal cord.
  - dorsal root ganglion.
  - ventral rami.

6. Pathological changes in which of the following would **LEAST LIKELY** cause an irritative lesion of a spinal nerve?

intervertebral disc  
zygapophyseal joint  
spinous process of vertebra  
vertebral body

7. A traumatic injury has severed a patient's spinal cord at the T11 vertebral level. Sensation would be lost in which of the following dermatomes?

T11 only  
T11 thru S5  
T12 thru S5  
L2 thru S5

8. On a plain film x-ray, which of the following would **NOT** be represented by the "white" or "light" areas on the image?

radiopaque structures  
more dense structures  
radiolucent structures  
thicker structures

dark to be metal

9. Which of the following is **NOT** innervated by dorsal rami?

skin on the lateral 1/3 of the back  
erector spinae muscle  
zygapophyseal joints  
supraspinous ligaments

10. Difficulty abducting or raising the right upper extremity over the head would most likely be explained by a lesion to which of the following structures?

right accessory nerve  
right lower subscapular nerve  
dorsal rami in the right upper back  
right thoracodorsal nerve

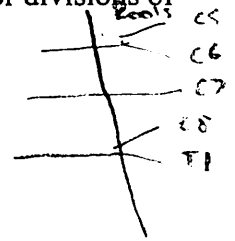
Lat Lat Dorsi

Gen. ab. anterior  
Low. thoracic

Ab - pec Minor, Lat. thoracic, anterior, deltoideus, serratus anterior, supraspinatus, supracapular

11. The lateral cord of the brachial plexus is formed by the convergence of the anterior divisions of the ...

middle and inferior trunks.  
middle trunk only.  
superior and middle trunks.  
superior trunk only.

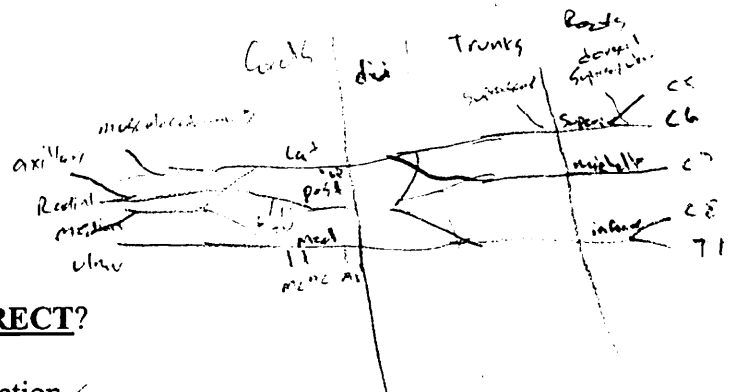


12. Which of the following arteries is most at risk in surgical neck fractures of the humerus?

suprascapular  
posterior humeral circumflex  
axillary  
deep artery of the arm

13. Which of the following groups of lymph nodes typically receives most of the direct drainage from the breast?

supraclavicular  
scalene  
axillary  
parasternal



14. Which muscle – action pair is **INCORRECT**?

latissimus dorsi – shoulder adduction ✓  
rhomboids – scapular retraction (adduction) ✓  
serratus anterior – upward rotation [of lateral angle] of the scapula  
teres major – lateral (external) rotation of shoulder

EX - D 1 TMI IN - RH, LD, TMA, D, S. subscapularis

15. Pain sensation from skin on the “shoulder pad” region of the upper limb is conveyed through the:

axillary nerve.  
lesser occipital nerve.  
suprascapular nerve.  
supraclavicular nerves.

16. Which of the following muscle – insertion pairs is **INCORRECT**?

teres minor – greater tubercle of humerus  
pectoralis minor – acromion process of scapula  
subscapularis – lesser tubercle of humerus  
serratus anterior – anterior surface of vertebral border of scapula

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

- Biceps brachii tendon
- Brachial artery
- Median nerve
- Radial nerve

TAN carpal tunnel

L-TAN N

18. Which of the following muscles inserts on the first metacarpal bone of the thumb?

- Abductor pollicis brevis
- Opponens pollicis
- Adductor pollicis
- Flexor pollicis brevis

19. A dentist is unable to hold a piece of dental floss between his index and middle fingers because of an injury to which of the following nerves?

- Radial
- Median
- Musculocutaneous
- Ulnar

Abduction

20. Which of the following is **NOT** innervated by the musculocutaneous nerve?

- Coracobrachialis
- Brachioradialis
- Biceps Brachii
- Brachialis

→ biceps  
Coracobrachialis

21. A midshaft fracture of the humerus typically would **NOT** affect the innervation of which of the following muscles?

- Brachioradialis
- Extensor carpi ulnaris
- Triceps
- Supinator

22. Inability to supinate the forearm could result from an injury to which of the following nerves?

- Axillary and radial *Ex. Inability*
- Musculocutaneous and median
- Radial and musculocutaneous
- Median and ulnar

23. Nerve damage that impairs flexion of the distal <sup>DIP</sup> interphalangeal joint of the index finger also produces which of the following conditions?

- Similar paralysis of the little finger
- Complete paralysis of the thumb
- Loss of sensation over the distal part of the second digit
- Loss of supination

*Flexor digitorum profundus  
median nerve & ulnar*

24. Which of the following correctly describes the location of the median nerve at the wrist?

- lateral to the radial artery
- lateral to the flexor carpi radialis tendon
- lateral to the palmaris longus tendon
- medial to the flexor carpi ulnaris tendon

*med . . . lat*

MORE QUESTIONS ON NEXT TWO PAGES