

1. The cerebrospinal fluid:

- A. is secreted by the arachnoid villi
- B. enters the four ventricles after filling and circulating through the subarachnoid space
- C. is completely renewed about once every 48 hours
- D. is formed by the choroid plexuses
- E. C) and D)

2. Broca's area:

- A. is found in the occipital lobe
- B. is usually found in the right hemisphere
- C. is considered a motor speech area
- D. is involved in spatial discrimination during somatosensory reception
- E. A) and C)

3. Damage to the cerebellum would result in:

- A. loss of memory
- B. uncoordinated movement
- C. inability to dream
- D. altered pituitary function
- E. inability to control body temperature

4. The abducens nerve regulates the movement of the:

- A. medial rectus muscle
- B. lateral rectus muscle
- C. superior rectus muscle
- D. inferior rectus muscle

5. The cerebellum:

- A. is located posterior to the brain stem and inferior to the cerebral hemispheres
- B. directly stimulates voluntary skeletal muscle contractions
- C. communicates with the cerebral hemispheres through three pairs of cerebellar peduncles
- D. has a superficial layer of white matter
- E. all of the above

6. If your nose itches, which primary sensory area receives that information?

- A. visual
- B. olfactory
- C. gustatory
- D. auditory
- E. somatosensory

7. A tumor is growing in the left lateral horns of several segments of a patient's spinal cord. How might these tumors affect the patient?

- A. The patient may not be able to feel somatic sensations from the chest down.
- B. The patient may not be able to move the lower extremities.
- C. The patient may have difficulty regulating cardiac and smooth muscle contractions.
- D. A) and B)

8. Which spinal nerves go directly to the tissues they supply without forming a plexus?

- A. C1 through C4
- B. C4 through T1
- C. T2 through T12
- D. L1 through L5
- E. S1 through S5

9. The outermost layer of the meninges is the:

- A. pia mater
- B. arachnoid mater
- C. choroid plexus
- D. dura mater
- E. ependyma

10. Irritation of a major nerve in this plexus may cause hiccups (spasms of the diaphragm):

- A. cervical plexus
- B. lumbar plexus
- C. sacral plexus
- D. thoracic plexus
- E. coccygeal plexus

11. A spinal nerve is covered from the inside out with a:

- A. myelin sheath, endoneurium, perineurium, epineurium
- B. myelin sheath, epineurium, perineurium, endoneurium
- C. myelin sheath, perineurium, epineurium, endoneurium
- D. epineurium, perineurium, endoneurium

12. The basal nuclei include all of the following EXCEPT:

- A. globus pallidus
- B. putamen
- C. amygdala
- D. caudate nucleus
- E. all answers are part of the basal nuclei

13. Bipolar neurons are commonly:

- A. motor neurons
- B. called neuroglia
- C. found in ganglia
- D. found in the retina of the eye

14. Cerebellar peduncles attach the cerebellum to the:

- A. medulla oblongata
- B. pons
- C. thalamus
- D. hypothalamus
- E. spinal cord

15. Striking the "funny bone" is actually stimulation of the:

- A. radial nerve
- B. sciatic nerve
- C. ulnar nerve
- D. median nerve
- E. phrenic nerve

16. Mixed cranial nerves containing both motor and sensory fibers include all EXCEPT which of the following?

- A. oculomotor
- B. glossopharyngeal
- C. trigeminal
- D. facial

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17. The area of the cortex that is responsible for sensations of the full bladder and the feeling that your lungs will burst when you hold your breath too long is the _____.
- A. olfactory cortex
 - B. gustatory cortex
 - C. vestibular cortex
 - D. visceral sensory area
18. As a result of the brain injury suffered by Kevin Chappell in the article I assigned to you to read, Kevin:
- A. had difficulty recognizing his children
 - B. could read only by tracing each letter first
 - C. was unable to draw what he was seeing
 - D. could not understand words when hearing them
 - E. had very poor short-term memory
19. When the term biceps, triceps or quadriceps forms part of a muscle's name, you can assume that:
- A. the muscle has two, three, or four origins, respectively.
 - B. the muscle is able to change direction twice, three times, or four times faster than other muscles, respectively.
 - C. the muscle has two, three, or four functions, respectively.
 - D. the muscle has two, three, or four insertions, respectively.
 - E. the muscle is composed of two, three or four fascicles, respectively.
20. Which of the following would NOT be involved in plantar flexion of the foot?
- A. soleus
 - B. fibularis longus
 - C. tibialis anterior
 - D. gastrocnemius
21. The "smiling" muscle is the:
- A. orbicularis oris
 - B. mentalis
 - C. zygomaticus
 - D. buccinator
 - E. none of the above
22. A nursing infant develops a powerful sucking muscle that adults also use for whistling called the:
- A. platysma
 - B. masseter
 - C. zygomaticus
 - D. buccinator
23. In a pennate muscle pattern:
- A. muscles appear to be strap-like
 - B. there is a narrow origin diverging to a broad insertion
 - C. there is a broad origin and fascicles converge toward a single tendon
 - D. muscles look like a feather
24. Which of these is NOT a way of naming muscles?
- A. muscle location
 - B. type of muscle fibers
 - C. type of action caused by the muscle
 - D. muscle shape
 - E. direction of muscle fibers

25. Adductor magnus, adductor longus and gracilis are muscles that are associated with the:
- A. lateral thigh
 - B. medial thigh
 - C. anterior thigh
 - D. posterior thigh
26. Which of the following muscles would NOT influence lip movement?
- A. zygomaticus
 - B. mentalis
 - C. orbicularis oculi
 - D. buccinator
 - E. all of the above would influence lip movement
27. The muscles that flex the leg and extend the thigh:
- A. are found in the posterior compartment of the thigh
 - B. include the semimembranosus and the semitendinosus
 - C. are collectively called the hamstrings
 - D. A) and B) are correct
 - E. A), B) and C) are correct
28. An instructor raises his eyebrows because he is very surprised by a student's comment during class. Which of the following muscles is involved in this surprised expression?
- A. epicranii
 - B. orbicularis oculi
 - C. zygomaticus
 - D. buccinator
 - E. levator scapulae
29. Which group of muscles flexes and rotates the neck?
- A. the scalenes
 - B. the iliocostalis
 - C. the spinalis
 - D. the splenius
30. Tennis players often complain about pain in the arm (forearm) that swings the racquet. What muscle is usually strained under these conditions?
- A. the triceps brachii
 - B. the anconeus
 - C. the brachioradialis
 - D. the flexor digitorum profundus
31. Which of the following is paired correctly?
- A. deltoid muscle // prime mover of arm abduction
 - B. erector spinae // prime mover of head flexion
 - C. commissural fibers // link areas WITHIN a cerebral hemisphere
 - D. adductor magnus muscle // lateral compartment of the thigh
 - E. biceps brachii // antagonist during arm flexion
32. Which of the following muscles is NOT involved in flexion of the knee?
- A. biceps femoris
 - B. sartorius
 - C. semimembranosus
 - D. gastrocnemius
 - E. soleus

33. Which of the following statements is/are TRUE?

- A. The right cerebral hemisphere is usually dominant for language and math.
- B. The primary visual cortex contains a map of visual space.
- C. One functional centre found within the medulla oblongata is a respiratory centre involved in regulating the rate and depth of breathing.
- D. Meningitis is the most accurate term for inflammation of neurons.
- E. B) and C)

34. Collections of nerve cell bodies inside the central nervous system are called:

- A. nuclei
- B. nerves
- C. ganglia
- D. tracts
- E. none of the above

35. Ciliated CNS neuroglia that play an active role in moving the cerebrospinal fluid are:

- A. ependymal cells
- B. Schwann cells
- C. oligodendrocytes
- D. astrocytes
- E. microglia

36. Loss of the ability to perform skilled motor activities such as piano playing, with no paralysis or weakness in specific muscles, might suggest damage to the:

- A. spinal cord
- B. premotor cortex
- C. primary motor cortex
- D. Broca's area

37. The primary visual cortex is located in the:

- A. occipital lobe
- B. frontal lobe
- C. temporal lobe
- D. parietal lobe
- E. insular lobe

38. Which of the following would help to determine if the oculomotor nerve (III) was damaged?

- A. have the patient distinguish between green and red colours
- B. have the patient read the letters on an eye chart
- C. have the patient look superiorly and inferiorly
- D. have the patient cry

39. The basal nuclei include:

- A. hippocampus
- B. lentiform nucleus
- C. red nucleus
- D. mammillary bodies
- E. B) and C)

40. The spinal cord has gray matter on the:

- A. outside, white matter on the inside and a ventral motor root
- B. inside, white matter on the outside and a dorsal motor root
- C. inside, white matter on the outside and a ventral motor root
- D. outside, white matter in the inside and a dorsal motor root