Psychology 433 (Neuropsychology):
Homework #2

Week 3: Basic Neuroanatomy  (Lecture 3/Chapter 3)

1. **anterior**  Another word for rostral is ______________.

2. **neuraxis**  The imaginary line drawn through the center of the length of the CNS, from the bottom of the spinal cord to the front of the forebrain is the ________.

3. **(B) rostral**  In humans the forehead is most _______.
   (A) caudal
   (B) rostral
   (C) medial
   (D) lateral
   (E) coronal

4. **ipsilateral**  Structures located on the same side of the body are said to be _______.

5. **(D) contralateral**  Two left cortex receives input from the right side of the body. This relationship is _______.
   (A) bilateral
   (B) medial
   (C) mesial
   (D) contralateral
   (E) ipsilateral

6. **sagittal**  A cut through the brain that divides the two hemispheres is called _______.

7. **(B) corpus callosum**  The largest commisural is called the _______.
   (A) lateral fissure
   (B) corpus callosum
   (C) lateral sulcus
   (D) medial sulcus

8. **central sulcus**  Which anatomical marker separates the frontal from the parietal lobe?
9. (A) rostral to the central sulcus The primary motor cortex is located immediately ________.
   (A) rostral to the central sulcus
   (B) caudal to the central sulcus
   (C) dorsal to the lateral fissure
   (D) ventral to the lateral fissure

10. temporal Which cerebral lobe contains the primary auditory cortex?

11. (A) most of the neural input received by the cerebral cortex The thalamus is responsible for ________.
    (A) most of the neural input received by the cerebral cortex
    (B) emotional behavior
    (C) planning movement
    (D) respiration

12. (D) planning movements The association cortex in the frontal lobes is involved in _____.
    (A) spatial localization
    (B) auditory localization
    (C) visual integration
    (D) planning movements

13. medulla oblongata The most caudal part of the brain stem is the ________.

14. mesencephalon The midbrain is also called the ________.

15. cerebellum Which structure is attached to the brainstem by the superior, middle, and inferior peduncles?

16. (B) pons and cerebellum Which two structures make up the metencephalon?
    (A) medulla and pons
    (B) pons and cerebellum
    (C) cerebellum and medulla
    (D) thalamus and hypothalamus

17. (D) cell bodies and dendrites Gray matter in the brain and spinal cord is made of ________
    (A) unmyelinated axons
    (B) myelinated axons
    (C) projection fibers
    (D) cell bodies and dendrites
18. **(A) horizontal** Which of the following is synonymous with the term “axial”?
   - (A) horizontal
   - (B) sagittal
   - (C) rostral
   - (D) caudal
   - (E) coronal

19. **(E) coronal** Which of the following is synonymous with “frontal” (as in “frontal cut”)?
   - (A) horizontal
   - (B) sagittal
   - (C) parietal
   - (D) caudal
   - (E) coronal

20. **rostral** The medulla is located just ______ to the spinal cord.

21. **ventral** The pons is located just _____ to the cerebellum.
   - (A) rostral
   - (B) caudal
   - (C) superior
   - (D) ventral
   - (E) dorsal

22. **(E) basal ganglia & cerebral cortex** The telencephalon comprises which of the following structures?
   - (A) tectum & tegmentum
   - (B) pons & cerebellum
   - (C) midbrain structures
   - (D) thalamus & hypothalamus
   - (E) basal ganglia & cerebral cortex

23. **(D)** Which of the following represents the correct order for the 5 levels of the brain neuraxis, from inferior to superior?
   - (A) telencephalon — diencephalon — mesencephalon — metencephalon — myelencephalon
   - (B) metencephalon — myelencephalon — mesencephalon — diencephalon — myelencephalon
   - (C) myelencephalon — mesencephalon — metencephalon — diencephalon — telencephalon
   - (D) myelencephalon — metencephalon — mesencephalon — diencephalon — telencephalon
   - (E) telencephalon — metencephalon — mesencephalon — diencephalon — myelencephalon

24. **(D)** Which of the following statements is false?
   - (A) Cranial nerves are classified as either efferent or afferent.
   - (B) Cranial nerves are classified as either somatic or visceral.
   - (C) Most cranial nerves originate in the brainstem.
   - (D) Each cranial nerve is associated with a single function.
   - (E) None of the above.
25. **(B) eye movement** Which of the following functions is NOT associated with the trigeminal nerves?
   (A) jaw movement
   (B) eye movement
   (C) temperature
   (D) normal sensation
   (E) pain sensation

26. **(D)** Which of the following is the correct order of white matter tracts, listed from the most superior to the most inferior?
   (A) pes pedunculi — pyramid of the medulla — internal capsule — corona radiata
   (B) corona radiata — pes pedunculi — internal capsule — pyramid of the medulla
   (C) pyramid of the medulla — pes pedunculi — internal capsule — corona radiata
   (D) corona radiata — internal capsule — pes pedunculi — pyramid of the medulla
   (E) pyramid of the medulla — internal capsule — pes pedunculi — corona radiata

27. **(A)** The Bell-Magendie law states that
   (A) the dorsal root of the spinal cord contains afferent fibers; the ventral root contains efferent fibers
   (B) the dorsal root of the spinal cord contains efferent fibers; the ventral root contains afferent fibers
   (C) the dorsal root of the spinal cord projects to the contralateral sensorimotor cortex
   (D) the dorsal root of the spinal cord projects to the ipsilateral sensorimotor cortex

28. **(C) shorter than** The spinal cord is ______ the vertebral canal.
   (A) longer than
   (B) equal in length to
   (C) shorter than
   (D) perfectly aligned with

29. **(C) medulla oblongata** Afferents within the spinocortical pathways cross the midline at the ______.
   (A) cerebral peduncle
   (B) pons
   (C) medulla oblongata
   (D) thalamus

30. **(B) agranular cortex** Primary motor cortex is also referred to as ______.
   (A) granular cortex
   (B) agranular cortex
   (C) dysgranular cortex
   (D) extragranular cortex