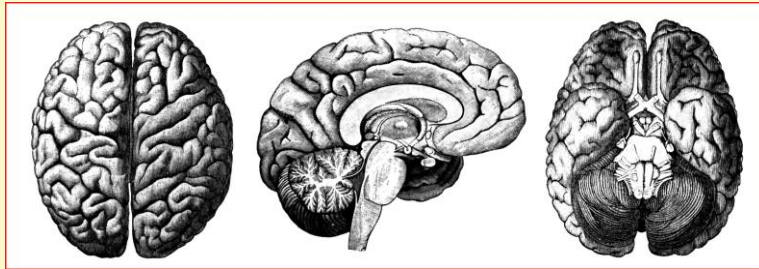


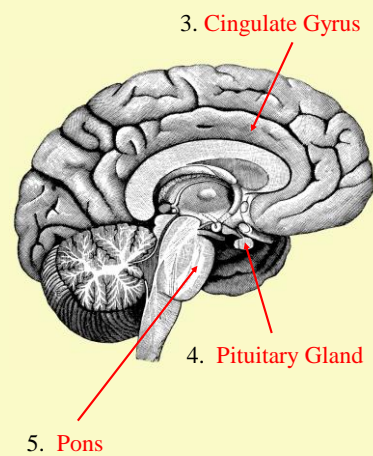
Human Brain



Answers to the Quizzes

Quiz 1A

1. The corpus callosum connects
 - A) motor cortex to the spinal cord
 - B) pons to cerebellum
 - C) left and right hemispheres**
 - D) hippocampus to mammillary body
2. The primary sensory cortex for the hand is located in
 - A) frontal lobe
 - B) superior temporal gyrus
 - C) calcarine fissure
 - D) postcentral gyrus**



Quiz 1B

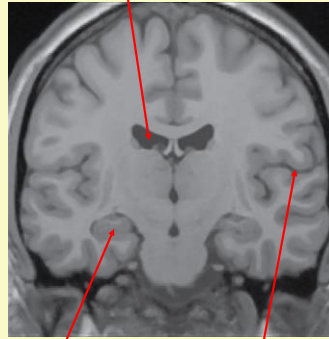
1. The cerebrospinal fluid is produced by the

- A) pineal gland
- B) choroid plexus**
- C) arachnoid villi
- D) pyramidal tract

2. The primary motor cortex for the hand receives blood from

- A) middle cerebral artery**
- B) posterior cerebral artery
- C) vertebral artery
- D) anterior spinal artery

3. Lateral Ventricle



4. Hippocampus

5. Lateral Sulcus

Quiz 2A

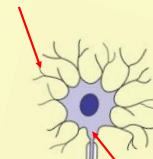
1. The neurons of the brain

- A) are separated from one another**
- B) are far more numerous than glial cells
- C) replace themselves by replication
- D) have no nuclei

2. The hippocampus

- A) looks like a hippopotamus
- B) shows neurofibrillary tangles in Alzheimer's Disease**
- C) receives its blood supply from the anterior cerebral artery
- D) is located in the occipital lobe

3. Dendrite



4. Axon Hillock

5. Myelin Sheath or Schwann Cell

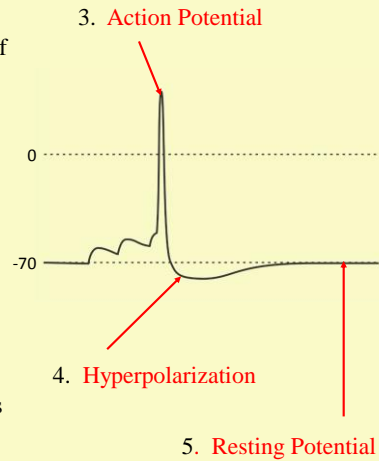
Quiz 2B

1. Compared to the outside, the inside of a resting neuron

- A) is positive
- B) has a higher concentration of potassium ions**
- C) has a higher concentration of sodium ions
- D) contains fewer enzymes

2. Unmyelinated nerve fibers

- A) conduct impulses more slowly than myelinated fibers.**
- B) are only present in peripheral nerves
- C) cannot regenerate their axons
- D) are primarily affected in multiple sclerosis

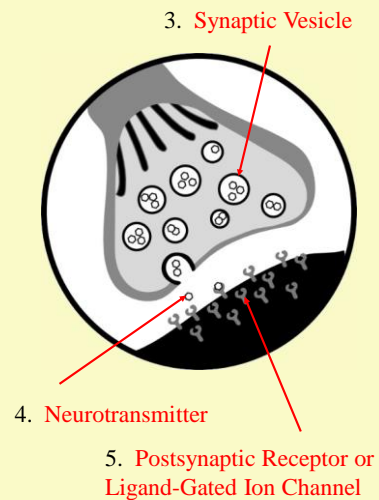
**Quiz 3A**

1. Neurotransmitters

- A) are released from the postsynaptic neuron
- B) are produced in the thyroid gland
- C) generate action potentials
- D) alter ion channels in the postsynaptic membrane**

2. Postsynaptic potentials

- A) can be excitatory or inhibitory**
- B) last for less than 1 millisecond
- C) are larger than the resting membrane potential
- D) occur in the brain's white matter



Quiz 3B

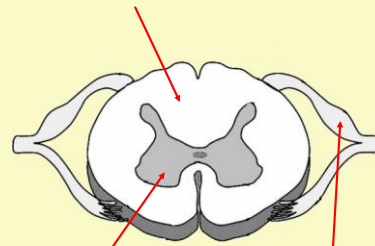
1. The basic pathway for the stretch reflex does not involve

- A) sensory receptors in the skin
- B) stretch receptors in muscle spindles
- C) alpha motor neurons
- D) dorsal root ganglion neurons

2. The left spinothalamic tract carries information about

- A) pain and temperature
- B) joint position sense
- C) the left side of the body
- D) the right side of the face

3. Dorsal Columns



4. Ventral Horn

5. Dorsal Root Ganglion

Quiz 4A

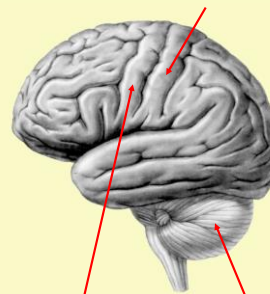
1. The chemical transmitter in the neuromuscular junction is

- A) dopamine
- B) acetylcholine
- C) myosin
- D) myelin

2. Most fibers in the pyramidal tract cross from one side to the other in the

- A) internal capsule
- B) midbrain
- C) medulla
- D) spinal cord

3. Postcentral Gyrus or Somatosensory Cortex



4. Precentral Gyrus or Motor Cortex

5. Cerebellum

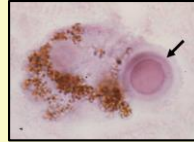
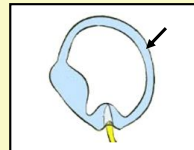
Quiz 4B

1. The chemical transmitter in the nigrostriatal pathway is

- A) acetylcholine
- B) dopamine**
- C) glutamate
- D) serotonin

2. Which of the following is **not** associated with Parkinson's Disease

- A) tremor
- B) rigidity
- C) slowness of movement
- D) sensory loss**

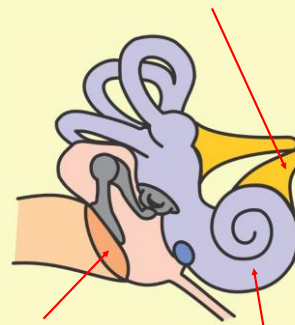
3. **Lewy Body**4. **Purkinje Cell**5. **Semicircular Canal****Quiz 5A**

1. The primary auditory cortex is located in the

- A) frontal lobe
- B) calcarine fissure
- C) superior temporal plane**
- D) postcentral gyrus

2. Most afferent fibers in the Auditory Nerve

- A) respond near threshold to a wide range of frequencies
- B) connect to the external hair cells
- C) increase their discharge rate with increasing intensity**
- D) inhibit the activity of hair cells

3. **Auditory/Cochlear Nerve**4. **Tympanic Membrane**5. **Cochlea**

Quiz 6B

1. The physiological blind spot is caused by

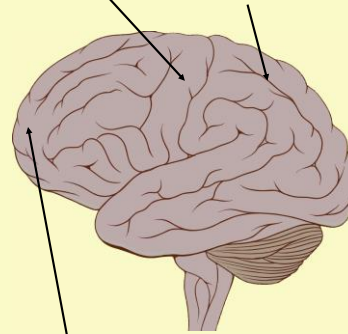
- A) pupils that do not react to light
- B) no receptors over the optic disc**
- C) retinal blood vessels
- D) prolonged pressure on the eye

2. When a picture is presented to the left visual field of a split-brain subject

- A) he can name the picture
- B) he can identify a corresponding object with the left hand**
- C) he can identify a corresponding object with the right hand
- D) he can see nothing

3. Motor Cortex for **Right Hand**

4. **Intraparietal Sulcus**



5. **Frontal Pole**

Quiz 7A

1. Amnesia is a

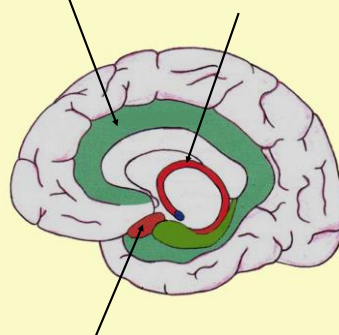
- A) a large sea slug used for physiological studies of learning
- B) an inability to recognize faces
- C) an inability to understand speech
- D) a loss of memory.**

2. Normal working memory

- A) can store about 7 pieces of information**
- B) is located in the occipital lobes
- C) can store information for years
- D) is not affected by aging

3. **Cingulate Gyrus**

4. **Fornix**



5. **Amygdala**

Quiz 7B

1. Transient global amnesia

- A) is a forewarning of a stroke
- B) is associated with aphasia
- C) lasts for over 24 hours
- D) requires no treatment**

2. The dopamine concentration in the synaptic cleft

- A) is increased in Parkinson's disease
- B) is decreased by cocaine
- C) is increased by dopamine uptake transporters
- D) is increased by amphetamines**

3. Sadness

4. Happiness



5. Anger

Quiz 8A

1. The most common type of aphasia seen immediately after a stroke is

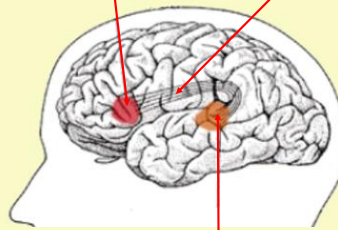
- A) Wernicke's aphasia
- B) Broca's aphasia
- C) Global aphasia**
- D) Anomic Aphasia

2. Anomic aphasia

- A) does not occur in frontotemporal dementia
- B) may evolve from Broca's aphasia**
- C) can be treated with dopamine
- D) is a symptom of normal aging

3. Broca's Area

4. Arcuate Fasciculus



5. Wernicke's Area

Quiz 8B

1. Which brain region is part of the “default network”

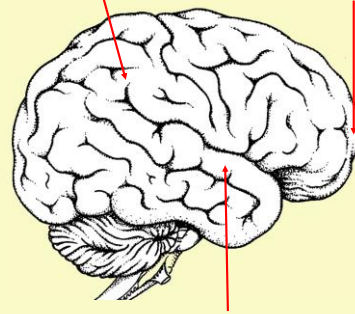
- A) Precentral Gyrus
- B) Calcarine Fissure
- C) **Inferior Parietal Lobule**
- D) Supplementary Motor Area

2. Which symptom is **un**common in Frontotemporal Dementia:

- A) **Wernicke’s aphasia**
- B) behavioral problems
- C) apathy
- D) anomia

3. **Inferior Parietal Lobule**

4. **Frontal Pole**



5. **Superior Temporal Gyrus**