

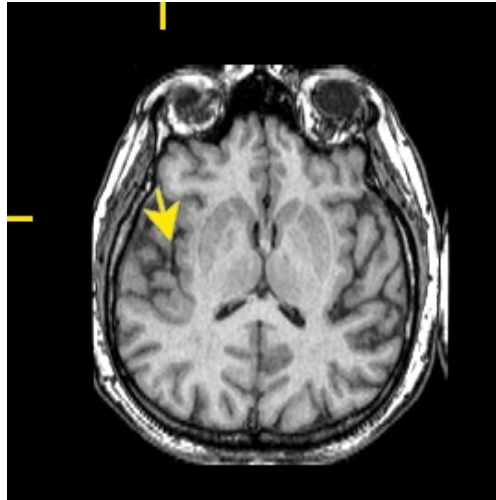
# PSYCH 260H Quiz 1

September 8, 2017

Answer the questions using the Scantron form.
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Name: \_\_\_\_\_

## 1 Main - 10 pts



1. The image illustrates what type of slice?
  - A. Sagittal.
  - B. Dorsal.
  - C. Coronal.
  - D. Axial.**
2. All of the following structures can be seen in the figure EXCEPT
  - A. Corpus callosum.
  - B. Gray matter.
  - C. 4th ventricle.**
  - D. Cerebral cortex.
3. The figure illustrates the use of \_\_\_\_\_magnetic resonance imaging (MRI), a technique with \_\_\_\_\_spatial resolution.
  - A. functional; fair ( $\sim 3+$  mm).
  - B. structural; good ( $\sim 1$  mm).**
  - C. neural; excellent ( $\sim 1$  micron).
  - D. diffusion tensor; poor ( $\sim 1$  cm).
4. Who believed that the *heart* was the mental organ, and the brain was merely a cooling system for the body?
  - A. Aristotle.**
  - B. Galen.
  - C. Vesalius.
  - D. Descartes.

5. Event-related potentials are detected using \_\_\_\_\_; they measure \_\_\_\_\_.  
A. positron emission tomography (PET); local metabolic rates.  
B. magnetic resonance imaging (MRI); the integrity of white matter fiber tracts.  
**C. electroencephalography (EEG); the time-locked electrical activity of large numbers of neurons.**  
D. magnetoencephalography (MEG); average brain magnetic activity.
6. The lateral fissure is \_\_\_\_\_ to the longitudinal fissure.  
A. posterior.  
B. anterior.  
C. rostral.  
**D. inferior.**
7. Information about airborne chemicals enters the CNS via the 1st (I) cranial or \_\_\_\_\_ nerve and projects to the \_\_\_\_\_.  
A. optic; lateral geniculate nucleus.  
**B. olfactory; olfactory cortex.**  
C. optic; substantia nigra.  
D. oculomotor; superior colliculus.
8. All of these structures are components of the midbrain EXCEPT:  
A. superior colliculus.  
**B. 3rd ventricle.**  
C. tegmentum.  
D. inferior colliculus.
9. Why does fMRI represent an indirect measure of brain activity?  
A. It measures brain structure, not function.  
B. It measures electrical activity, but neurons send chemical messages.  
**C. It measures changes in blood oxygen and blood flow that follow neural activity.**  
D. It has poor spatial resolution.
10. Anterograde and retrograde histochemical tracers help neuroscientists determine \_\_\_\_\_.  
A. what stimuli best activate a brain region.  
**B. what connects where.**  
C. when to stimulate a brain region for maximum effect.  
D. whether a brain area is functioning normally.

**Turn to the next page to answer the bonus questions.**

## 2 Bonus

11. This forebrain structure in the ventral diencephalon controls both the autonomic nervous system and the endocrine system.
- A. Hippocampus.
  - B. Thalamus.
  - C. Medulla.
  - D. Hypothalamus.**
12. The arrow in the figure on page 2 shows two parts of the brain that are structurally related and adjacent to one another, the \_\_\_\_\_ and the \_\_\_\_\_.
- A. lateral fissure; temporal lobes.**
  - B. spinal cord; lateral ventricles.
  - C. amygdala; tectum.
  - D. basal ganglia; 4th ventricle.