

Exam 1 10/18/07

Name: _____

Please read the instructions carefully. We will not return scantron sheets, so you may want to record your answers.

Ethics Pledge:

I agree to complete this exam without unauthorized assistance from any person, materials, or devices.

Signature

(Failure to sign the pledge invalidates your exam. See *Academic Ethics for Undergraduates*.)

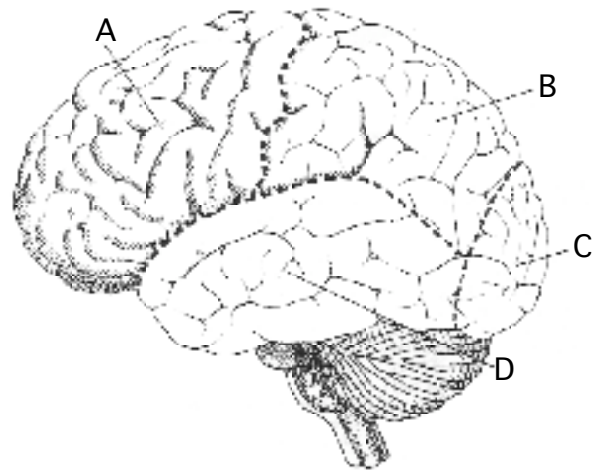
Date

Section 1: Matching (2 points per question)

Clearly mark one (1) and only one answer per question on both the paper and scantron.

Use the letters on the diagram to the right of the questions to answer questions 1-12. Answers may be used more than once.

1. Temporal Cortex
2. Prefrontal Cortex
3. Occipital Cortex
4. Parietal Cortex
5. Location of primary visual cortex
6. Region associated with the ventral visual pathway
7. Region associated with the dorsal visual pathway
8. Region most anterior to the central sulcus
9. Damage to portions of this region is associated with agnosia and prosopagnosia.
10. Region associated with primary visual processing
11. Encompasses region associated with speech *production*
12. Encompasses region associated with speech *comprehension*



Section 2: True/False (2 points per question)

For each of the following questions 13-20, mark (A) if the statement is true and (B) if the statement is false. Clearly mark one (1) and only one answer per question on both the paper and scantron.

- A. TRUE
- B. FALSE

13. Virgil's relapse in *At First Sight* was largely due to being blinded during the critical period for developing vision.
14. Left hemispherectomy patients have demonstrated that language comprehension is processed in both hemispheres.
15. The 10% myth was traditionally supported by evidence for equipotentiality.
16. Dissociative Identity Disorder is a common symptom of schizophrenia.
17. Contralateral visual field mapping only occurs when one eye is deprived of sight during the critical period for ocular dominance columns.
18. Visual illusions were used as examples of how experience might cause one to incorrectly perceiving an image.
19. When trying to draw a square and a circle with the right and left hand, respectively, a person with a healthy brain will often produce a hybrid shape with each hand.
20. Modern treatment for Dissociative Identity Disorder typically uses psychodynamic techniques such as hypnosis.

Section 3: Multiple Choice (3 points per question)

For each of the following questions, please choose the most appropriate answer from the choices. Clearly mark one (1) and only one answer per question on both the paper and scantron.

21. According to the *DSM IV* diagnostic criteria, to be diagnosed with Dissociative Identity Disorder, a person must show...
 - a. ...a history of prolonged and recurring abuse.
 - b. ...episodes of uncontrollable anger.
 - c. ...evidence of hearing unexplained voices.
 - d. ...evidence of amnesic episodes.
 - e. ALL OF THE ABOVE

22. Lashley tested the effects of size and location of lesions to rat cortex to determine...

- a. ...the capacity for learning following various types of lesions.
- b. ...the functional of the corpus callosum.
- c. ...the hemispheric asymmetry of cortical processing.
- d. ...the differences between rat and human cortex.
- e. ...the critical periods for developing basic cognitive functions.

23. Patients suffering from Broca's and Wernicke's aphasia provided evidence for...

- a. ...the intimate connection between comprehension and production in language.
- b. ...left lateralization of language in the brain.
- c. ...contralateral motor control in the brain.
- d. ...the multi-modal nature of object identification.
- e. ...the use-it-or-lose-it principle of brain function.

24. Which of the following was given as evidence against the 10% myth?

- a. Humans are born with smaller brains than animals of similar body size.
- b. The equipotentiality of cortex in non-human animal studies suggests considerable redundancy of function.
- c. Cytoarchitecture (types and characteristic of neurons) varies in different regions of the brain.
- d. Untapped potential would leave humans at a genetic/evolutionary disadvantage.
- e. NONE OF THE ABOVE

25. The image to the right is an example of...

- a. ...the ambiguity of visual processing.
- b. ...the notion that vision is an interpretive process.
- c. ...the automaticity of object processing.
- d. ...illusory contours.
- e. ALL OF THE ABOVE



26. When shown the *words* "toad" in the left hemifield and "stool" in right hemifield, a split-brain patient would most likely...

- a. ...verbalize "stool" and fail to report "toad".
- b. ...verbalize "stool" but draw a mushroom.
- c. ...verbalize "toadstool" but draw a stool alone.
- d. ...draw a toad with the left hand and stool with the right hand.
- e. ...fail to report either "toad" or "stool" but draw a mushroom.

27. Completely forgetting one's own identity and autobiographical memories is referred to as:

- a. Dissociative Identity Disorder
- b. Dissociative Memory Disorder
- c. Dissociative Amnesia
- d. Dissociative Fugue
- e. Depersonalization Disorder

28. In *Drawing from the Right Side of the Brain*, the Face/Vase drawing exercise illustrated...

- a. ...the shift from L-Mode to R-Mode.
- b. ...the shift from R-Mode to L-Mode.
- c. ...the interference caused by verbal labeling in L-Mode.
- d. ...the conflict produced by drawing only half of an image.
- e. ...the ease with which humans perceive lines as complex figures.

29. Which of the following reflect the basic concept(s) of genetic advantage?

- a. Traits that promote reproductive success will be maintained, whereas those that do not will be eliminated.
- b. Mutations will occur only in reaction to a change in the environmental conditions.
- c. Traits have a genetic advantage if they are sensitive to environmental changes.
- d. Traits that promote untapped mental capacity will be favored, whereas those that tax capacity will be discarded.
- e. ALL OF THE ABOVE

30. Which of the following best describes the typical case of hemineglect?
- Failure to attend to the left side of space as a result of damage to the right parietal cortex.
 - Failure to attend to the left side of space as a result of damage to the left parietal cortex.
 - Failure to attend to the left side of space as a result of damage to the right temporal cortex.
 - Failure to attend to the left side of space as a result of damage to the left temporal cortex.
 - NONE OF THE ABOVE
31. A vast majority of DID cases have suggested that the patient experienced...
- ...an acute tramatic episode during childhood.
 - ...prolonged and recurring abuse during childhood.
 - ...an acute tramatic episode during adulthood.
 - ...prolonged and recurring abuse during adulthood.
 - NONE OF THE ABOVE
32. Prosopagnosia was used in class as an example of...
- ...intact visual processing, but a failure to produce the verbal label.
 - ...intact face processing, but a failure to verbalize names.
 - ...intact visual acuity, but a failure to recognize faces.
 - ...intact self-recognition, but a failure to recognize famous faces.
 - ...the difference between ventral and dorsal processing of language.
33. According to the lecture, two ways to think about the "fate" of the different personalities in DID treatment are:
- Assimilation and Resistance
 - Integration and Elimination
 - Identification and Healthy Multiplicity
 - Incorporation and Cooperation
 - Defragmentation and Eradication

34. When kittens were raised in environments that allowed only them to perceive only vertical stripes, which of the following results was observed?
- a. Visual cortex showed no evidence of ocular dominance columns.
 - b. Orientation selective neurons for horizontal lines failed to develop.
 - c. Visual cortex returned to normal if the kitten was allowed to view the world normally as an adult.
 - d. The kittens failed to develop vision.
 - e. NONE OF THE ABOVE
35. Which of the following was identified as the basic premise for treatment of DID?
- a. Each personality has the capacity to function as a complete person in daily activities.
 - b. All personalities are equally important to the well-being of the patient.
 - c. Each personality has its specific role in the different aspects of daily life.
 - d. Stronger personalities will be the most resistant to treatment.
 - e. Each personality has access to all of the memories of the patient up to and including the onset of DID.

Short Answer

Answer each of the following questions using ONLY THE SPACE PROVIDED. Give simple responses that answer the question as clearly as possible. These can be bullet points or sentences. POINTS DEDUCTED FOR ILLEGIBLE OR SMALL PRINT.

36. (5 points) Why would turning an image upside-down make it easier to draw according to the video (and lecture)?

37. (5 points) Explain the four reasons, given in class, why psychiatrists and psychologists became skeptical of the existence of DID.

38. (5 points) Explain Virgil's experience with the apple and the picture of the apple. How does this speak to vision as interpretation?