PSYCH 511 Quiz 3

November 15, 2017

Answer the questions in the spaces provided on the question sheets. If you run out of room for an answer, continue on the back of the page. Circle the correct answer or answers to multiple choice/fill-in questions. The quiz is due Wednesday, November 29, 2017.

Name: _____

1 Main

1. The NMDA receptor is thought to be a component of the brain's associative learning system. What features of the NMDA receptor enable it to signal that *both* the sending and receiving cell are co-active?

2. Name a brain area that is a central node in the brain's reward processing system.

3. The hippocampus appears to specialize in storing particular kinds of information. Give an example.

4. Give two examples of the type of information *exteroceptive* sensory systems provide.

5. Give an example of a sensory receptor that is specialized for a particular type of energy or chemical pattern.

6. Both the autonomic and neuroendocrine systems are controlled by this brain area in the diencephalon. What is it? Which two 'axes' orginate here?

7. True or false: The topographic arrangement of neurons found in many sensory systems extends to the motor system, including the spinal cord.

8. True or false: Sensitivity to a particular type of stimulation is *uniform* across the sensory surface (retina, skin, cochlear membrane). Support your answer.

9. What change in brain structure appears common to chronic stress and major depressive disorder?

10. What does ketamine do? Why is it the target of such intensive research interest?

2 Bonus

11. The _____cranial nerve conducts visual information; the _____cranial nerve conducts auditory information; the _____cranial nerve conducts olfactory information; the _____or vagal nerve provides the bulk of parasympathetic nervous system output.
    A. I (1st)
    B. II (2nd)
    C. III (3rd)
    D. XIII (8th)
    E. X (10th)

12. The hypothalamus releases _____into the posterior pituitary, thereby influencing uterine contractions, the milk let-down reflex, and other functions associated with reproductive and affiliative behavior.
    A. ACTH
    B. cortisol
    C. oxytocin
    D. arginine vasopressin

13. How does the myotatic (stretch) reflex circuitry avoid tremor caused by competition between the agonist and antagonist muscles that control a joint like the elbow?