

Biology 251
September/October 2011
PRACTICE Exam Two Key

Bold = 2 pt answer *Italics* = ½ pt answer

1. The division of the nervous system that contains the special senses is the
 - a) Central nervous system
 - b) Afferent nervous system**
 - c) Efferent nervous system
 - d) Somatic nervous system
 - e) Both b and d
2. The cerebellum is involved in
 - a) coordination of voluntary muscle activity*
 - b) maintenance of balance*
 - c) sensory perception
 - d) all the above
 - e) both a and b**
3. Glial cells
 - a) comprise 90% of the cells in the CNS*
 - b) conduct nerve impulses
 - c) support the CNS physically and metabolically*
 - d) both a and b
 - e) both a and c**
4. Which of the following is NOT one of the primary tastes?
 - a) bitter
 - b) spicy**
 - c) salty
 - d) sweet
 - e) sour
5. Which of the following are afferent receptors found in the human body?
 - a) osmoreceptors*
 - b) wetoreceptors
 - c) chemoreceptors*
 - d) all the above
 - e) both a and c**
6. Taste receptor cells can be depolarized by decreased outward flux of potassium by all of the following primary tastes except one. Which of the following is the exception?
 - a) sweet
 - b) sour
 - c) salty**
 - d) bitter
 - e) all of the above

7. During a fight or flight response, _____ receptors in blood vessels leading to the GI tract bind primarily _____ which causes the blood vessels to _____.
- a) Beta-2; epi; dilate
 - b) Beta-2; norepi; dilate
 - c) **Alpha; norepi; constrict**
 - d) Beta-1; epi; dilate
 - e) Beta-1; norepi; dilate
8. When an action potential reaches the terminal button of a motor neuron it triggers ____.
- a) **the opening of Ca⁺⁺ channels and the entry of Ca⁺⁺ into the cell**
 - b) the opening of Ca⁺⁺ channels and the exit of Ca⁺⁺ from the cell
 - c) the opening of Na⁺ channels and the entry of Na⁺ into the cell
 - d) the opening of K⁺ channels and the exit of K⁺ from the cell
 - e) the release of A⁻ from the cell
9. Which of the following events in the human female sexual cycle are NOT caused by the parasympathetic nervous system?
- a) Vasocongestion in the vagina
 - b) Reduction of the inner circumference of the vagina
 - c) Vasocongestion in the breasts
 - d) **Rhythmic contraction of pelvic muscles at 0.8 second intervals**
 - e) Vasocongestion of the clitoris
10. Which of the following statements about tropic hormones is true?
- a) **A tropic hormone acts on another endocrine gland and causes it to release its hormone**
 - b) Epinephrine is a tropic hormone
 - c) All lipophilic hormones are tropic hormones
 - d) Both a and b are true
 - e) Both a and c are true
11. The release of _____ from the pineal gland is important for establishing _____.
- a) melatonin : thirst
 - b) prolactin : circadian rhythm/biological clock
 - c) **melatonin : circadian rhythm/biological clock**
 - d) prolactin : breast milk production
 - e) melanin : thirst

12. Lipophilic hormones are transported in blood _____ and bind to receptors located _____.
- a) dissolved in the plasma : on the plasma membrane of the target cell
 - b) dissolved in the plasma : inside the target cell
 - c) bound to carrier proteins : on the plasma membrane of the target cell
 - d) bound to carrier proteins : inside the target cell**
 - e) inside red blood cells : inside the target cell
13. Hormone(s) that trigger(s) ovulation in females
- a) LH**
 - b) FSH
 - c) Progesterone
 - d) Estrogen
 - e) Estrogen and Progesterone
14. A person who suffers hypothyroidism probably has
- a) *Poor cold tolerance*
 - b) *Slow speech and poor memory*
 - c) Increased food consumption
 - d) All the above
 - e) Both a and b**
15. Which of the following statements about regulation of thyroid hormones is true?
- a) TSH positively feeds back on the hypothalamus causing TRH release
 - b) T3 and T4 negatively feed back on the pituitary to reduce TSH release**
 - c) T3 and T4 negatively feed back on the pituitary to reduce TRH release
 - d) TRH negatively feeds back on the hypothalamus to reduce TSH release
 - e) Both a and b are true