Name: _____ Question Set 44

CHAPTER 41: Chemical Regulation

1. List a few similarities and differences comparing:

    a. endocrine system – _____

    _____

    b. nervous system – _____

    _____

2. What is the difference between endocrine and exocrine glands?

_____

_____

3. What is the difference between circulating hormones and local hormones?

_____

_____

4. What is the difference between paracrine and autocrine hormones?

_____

_____

5. What evidence is there that show that hormones were an early adaptation in the evolution of animals?

_____

_____

_____

_____

6. How do the steroid-based and protein-based hormones differ?

_____

_____

7. Hormone and receptor interactions are based on _____

8. Where are the receptors for steroid-based hormones?

_____

_____

9. Relate your knowledge of integral (transmembrane) proteins and the actions of protein-based hormones.

_____

_____

_____

_____

10. List the three stages of cell signaling of protein-based hormones and where each occurs.

    a. _____

    b. _____

    c. _____

11. What does the "second messenger" do in the cell?

_____

_____

12. Identify molecules that serve as "second messengers" in a cell.

_____

_____

13. What is the advantage of the phosphorylation cascade?

_____

_____

14. Explain what makes the hypothalamus a "hybrid" part of the endocrine system. Elaborate on its role.

_____

_____

_____

_____

15. What are the functions of the following glands:

    a. thyroid – _____

    _____

    b. parathyroid – _____

    _____

16. What happens when there is an iodine deficiency?

_____

_____

17. List the sequence of steps of the feedback mechanism to the cell response that involves fluctuation levels of calcium using calcitonin and PTH.

_____

_____

_____

18. How does the pancreas regulate blood sugar with:

a. insulin – _____

_____

b. glucagon – _____

_____

19. What are two mechanisms that can stimulate the adrenal gland?

_____

_____

20. Describe several actions caused by the release of epinephrine.

_____

_____

21. What is the role of the gonadotropic hormones in males and females?

a. FSH – _____

_____

b. LH – _____

_____

22. What hormones are responsible for the secondary sex traits in males and females?

_____