The Pancreas

Read Chapter 17.6

Fill in the blanks

1. The pancreas functions as both an endocrine and an exocrine gland. The _____ functions include releasing bicarbonate and enzymes into the small intestine during digestion and the _____ functions are when it releases hormones into the bloodstream.

2. _____ is the hormone that increases blood sugar.

3. _____ is the hormone that decreases blood sugar.

4. _____ cells produce insulin.

5. _____ cells produce glucagon.

6. _____ is the pancreatic hormone produced during fasting, stress, or exercise.

7. _____ is the pancreatic hormone produced after eating.

8. Different foods stimulate different amounts of insulin secretion. _____ foods increase insulin the most.

9. High blood sugar above the normal range is called _____

10. Low blood sugar below the normal range is called _____

11. In a blood sugar negative feedback loop, the integrating center is the _____.

12. Insulin causes excess nutrients to be stored as _____ or _____.

13. Insulin stimulates cells to increase the production of _____ that allows glucose to enter cells.

14. Excess glucose can be stored as glycogen in the _____ and _____ cells.

15. Write the correct process for each of the following: Lipogenesis, gluconeogenesis, lipolysis, glycogenesis, glycogenolysis

    a. Breaking down fat _____

    b. Breaking down glycogen _____

    c. Making fat from sugar _____

    d. Making glycogen from sugar _____

    e. Making sugar from amino acids _____

16. People that cannot produce insulin have an autoimmune disease called _____.

17. People that have insulin resistance can develop type _____ diabetes.

18. Which type of diabetes involves hyporesponsive cells? _____

19. Bert feels hungry, is craving sugar, feels tired, shaky and anxious. He is most likely experiencing (hyper or hypoglycemia) _____

20. Gladys has been excessively thirsty, is having trouble losing weight, and frequently craves sugar. She is most likely experiencing (Hyper or hypoglycemia) _____

21. Insulin resistance can be prevented with a moderate or low intake of _____

22. List 3 possible complications of having long term high blood sugar:

    a. _____

    b. _____

    c. _____