Don't forget to put your name here!

Name:__________________________

Spelling WILL count!

[When you email this back to me, make sure to save the file name your name if front, like this example: Tamatha Barbeau Lecture Quiz 1]

1. When blood glucose rises above normal, the pancreas secrete this hormone. ______________

2. When blood glucose drops below normal, the pancreas secrete this hormone. ______________

3. If your blood pressure rises too high (stimulus), what structure is the “integrating center” that stimulates the heart rate to increase? ______________

4. Where are the two baroreceptors that sense when blood pressure is outside of normal range? ______________ & ______________

5. In the positive feedback loop regulating milk release when a woman is breastfeeding a child, what is the integrating center causes oxytocin release when the nipple is stimulated by suckling? ______________

6. What is the physiology by which insulin decreases blood glucose? ______________

7. What is the physiology by which glucagon increase blood glucose? ______________

8. What does vasoconstriction of systemic arteries do to blood pressure? ______________

9. In the negative feedback regulation of body temperature, what effectors respond when body temperature is too low? ______________

10. How much more acidic is stomach acid (pH 1) than urine (pH 6)? ______________

11. Regarding the Clinical application reading on synthetic corticosteroids and negative feedback, what is a side effect of taking dexamethasone or prednisolone for inflammation? A link to this reading is listed in your Ch 1 study guide. ______________

12. From the Clinical App reading on abuse of anabolic steroids and negative feedback, explain what is a side effect of taking these steroids? A link to this reading is listed in your Ch 1 study guide. ______________

13. From our lecture on pH, what organ(s) can correct changes in blood pH the fastest? ______________

14. The correct term for a rise in blood pH is: ______________

15. The correct term for a drop in blood pH is: ______________
16. What is the term for the process by which 1 molecule of glucose is converted into 2 pyruvate molecules, along with 2 ATP and 2 NADH? _______________

17. What enzyme is needed in order for glycogenesis to occur in skeletal muscles and the liver? _______________

18. What enzyme is needed for the liver to breakdown glycogen 6 phosphate into free glucose to be released into the bloodstream? _______________

19. What is the specific term for the process by which the liver recycles lactic acid from the blood and converts it into glucose or glycogen? _______________

20. _______________ is the term for the process by which the liver, or fat cells, break down lipids to produce glucose (making glucose from a no-carbohydrate source).

21. From the Clinical App reading, why is cyanide so deadly? (What is the physiology of what the toxin does within cells?) __________________________________________________________

22. In the process of lipogenesis in the liver, after acetyl CoA is made, which of the following can be converted into bile or steroid hormones?
   A. Acetone    B. Aldehyde  C. beta-hydroxybutyric acid  D. Cholesterol  E. None of these

23. In the process of lipogenesis in the liver, after acetyl CoA is made, which can be converted directly into triglycerides (white fat)?
   A. Fatty acids    B. Amino acids  C. Lactic acid  D. Ketones  E. Pyruvate

24. Which of the following molecules, from excessive skeletal muscle activity, can cause metabolic acidosis?
   A. Ketones    B. Amino acids  C. Fatty acids  D. Lactic acid

25. A) What is Azotemia? __________________________
    B) What can azotemia indicate is happening in the body? __________________________

26. Individuals with PKU must avoid which amino acid in their diet? _______________
27. Explain to me WHY a patient with Diabetes (either Type 1 or Type 2) could experience diabetic ketoacidosis: (in your explanation, include the physiological problem that causes ketones to increase in their blood.)

__________________________________________________________________________________________

28. How does Ozempic treat Diabetes? (Explain the physiology of HOW the drug helps regulate blood glucose, involving the negative feedback pathways we’ve covered in lecture.)

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29. What is hyperlactatemia, and what is its significance in diagnosing a possible myocardial infarction? (Explain the physiology of how cell respiration is going wrong in heart muscle to cause this condition.)

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30. Okay. It’s time to do some Google research! Hypertension is one of the “Big Three” diseases within the Pee Dee of S.C. Look up the drug Atenolol, which is prescribed to lower blood pressure in patients with hypertension. Explain to me HOW this helps regulate blood pressure (its mechanism of action), with emphasis on how it acts within the physiological pathways you’ve learned in our lectures.

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