Practice Questions Ch 1: updated 1/28/21

1. The primary stimulus for insulin secretion is
   A. increased blood glucose. C. increased body temperature.
   B. increased blood calcium. D. increased exposure to sunlight.

2. If blood glucose levels decrease from normal, which of the following changes takes place to bring glucose levels back to normal?
   A. Insulin secretion from the pancreas C. Glucagon secretion from the pancreas
   B. Glycogen secretion from the pancreas D. Oxytocin secretion from the pancreas

3. What responds to oxytocin release?
   A. Heart D. Milk glands
   B. Blood vessel smooth muscle E. Sweat glands
   C. Uterine smooth muscle

4. What is the sensor in the positive feedback loop involving a child breast feeding and oxytocin release?
   A. Baroreceptors in the nipple C. Tactile receptors in the nipple
   B. Thermoreceptors in the nipple D. Tactile receptors in the cervix

5. This integrating center in the positive feedback loop involving a child breastfeeding and oxytocin release?
   A. Hypothalamus C. Pancreas
   B. Medulla D. Pons

6. What does insulin do?
   A. Stimulates the liver to breakdown glucose into glycogen.
   B. Stimulates the liver to breakdown glycogen into glucose.
   C. Stimulates the body’s cells to take up glucose from the blood.
   D. Stimulates the liver to release glucose into the blood.

7. The nucleus (or nuclei) in the hypothalamus that responds to the nipple being stimulated by a nursing infant.
   A. Supraoptic B. Paraventricular C. Anterior

8. Anabolic steroid abuse in males can cause testicular atrophy and gynecomastia.
   A. TRUE B. FALSE

9. What does glucagon do?
   A. Stimulates the liver to breakdown glucose into glycogen.
   B. Stimulates the liver to breakdown glycogen into glucose.
   C. Stimulates the body’s cells to take up glucose from the blood.
   D. Stimulates the liver to release glucose into the blood.

10. _________ sense the stimulus of a baby’s head pressing against the cervix.
    A. Touch receptors B. Stretch receptors C. Thermoreceptors D. Pain receptors

11. The integrating center that receives the information from the sensor given in question 10 above.
    A. Hypothalamus C. Pancreas
    B. Medulla D. Pons

12. The sensor that detects changes in arterial blood pressure.
    A. Aortic and carotid artery baroreceptors D. Hypothalamus
    B. Medulla E. Pancreas
    C. Arteriole endothelium
13. The integrating center that detects responds to changes in arterial blood pressure by sensors in question 12 above.
   A. Aortic and carotid artery baroreceptors  D. Hypothalamus
   B. Medulla  E. Pancreas
   C. Arteriole endothelium

14. The nucleus in the hypothalamus that responds to a change in body temperature.
   A. Supraoptic  B. Paraventricular  C. Anterior

15. When body temperature is too high, these effectors respond to hypothalamic stimulation to cool the body.
   A. Anterior nucleus.  C. Skeletal muscles.
   B. Heart muscle.  D. Sweat glands.

16. A blood pH of 7.9 is
   A. indicative of acidosis.
   B. indicative of alkalosis.
   C. in the normal physiological range.
   D. indicates effective buffering by the bicarbonate/carbonic acid system.

17. A blood pH of 6.4 is
   A. indicative of acidosis.
   B. indicative of alkalosis.
   C. in the normal physiological range.
   D. indicates effective buffering by the bicarbonate/carbonic acid system.

18. When body temperature is too low, these effectors respond to hypothalamic stimulation to warm the body.
   A. Anterior nucleus.  C. Skeletal muscles.
   B. Heart muscle.  D. Sweat glands.

19. Which organ or organ system functions the fastest to correct an abnormal shift in blood pH?
   A. Liver  B. Lungs  C. Digestive  D. Kidneys  F. Heart

20. What is the effector that the medulla stimulates to increase arterial blood pressure?
   A. Urinary bladder  D. Digestive smooth muscle  G. Answers B & C
   B. Skeletal muscles  E. Heart  H. Answers C & E
   C. Arterial endothelium  F. Bronchiole smooth muscle  I. Answers A & B

21. The _________ cells of the pancreas secrete insulin.
   A. Delta  B. Alpha  C. Beta  D. Gamma

22. The _________ cells of the pancreas secrete glucagon.
   A. Delta  B. Alpha  C. Beta  D. Gamma

23. How can systemic arteries increase your blood pressure?
   A. Vasodilation  B. Vasoconstriction

24. How much more acidic is urine (pH 6) than ammonia (pH 11)?
   A. 1,000  C. 100,000
   B. 10,000  D. 1,000,000
25. 23. How can systemic arteries decrease your blood pressure?
   A. Vasodilation   B. Vasoconstriction

26. Which of the following is considered lower than normal systolic arterial blood pressure?
   A. 100mmHg   B. 80 mmHg   C. 120mmHg   D. 60mmHg   E. 180mmHg

27. Which of the following is considered higher than normal systolic arterial blood pressure?
   A. 100mmHg   B. 80 mmHg   C. 120mmHg   D. 60mmHg   E. 180mmHg

28. Normal human blood pH range is
   A. 7.25 – 7.35   D. 7.65 – 7.75
   B. 7.5 – 8.0   E. 6.35 – 6.45
   C. 7.35 – 7.45   F. 6.5 – 7.0

29. What is the relative acidity of wine (pH 4) compared to soap (pH 10)?
   A. 1,0000   B. 100   C. 100,000   D. 1,000,000   E. 10,000,000,000,000

30. Which of the following organ systems has the biggest and fastest impact on regulating blood pH?
   A. Renal   B. Cardiovascular   C. Respiratory   D. Digestive
Ch 1. Answers:
1. A
2. C
3. C & D
4. C
5. A
6. C
7. A & B
8. A
9. B
10. B
11. A
12. A
13. B
14. C
15. D
16. B
17. A
18. C
19. B
20. H
21. C
22. B
23. B
24. C
25. A
26. B
27. E
28. C
29. D
30. C

How did you do?