Practice Questions Ch 1: updated 08/28/24

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

2. If blood glucose levels decrease from normal, which of the following hormones will be secreted by the pancreas to bring glucose levels back up to normal?
   A. Insulin secretion from the pancreas
   B. Gycogen secretion from the pancreas
   C. Glucagon secretion from the pancreas
   D. Oxytocin secretion from the pancreas

3. In the positive feedback loop of breastfeeding a baby, and also childbirth, which of the following responds to oxytocin release? (There are 2 correct answers)
   A. Heart
   B. Blood vessel smooth muscle
   C. Uterine smooth muscle
   D. Milk glands
   E. Sweat glands

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

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

6. What does insulin do?
   A. Stimulates the liver to break down glucose into glycogen.
   B. Stimulates the liver to break down 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. Synthetic glucocorticoids, like prednisone, can have which of the following effects in the body, due to negative feedback? (There are 2 correct answers)
   A. Testicular atrophy
   B. Gynocomastia
   C. Decrease in pituitary ACTH secretion
   D. Increase in pituitary ACTH secretion
   E. Adrenal gland atrophy
   F. Erectile dysfunction

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

9. What does the hormone glucagon do? (There are 2 correct answers)
   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. In the positive feedback loop, _____ 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
   B. Medulla
   C. Pancreas
   D. Pons

12. The sensor(s) that detects changes in arterial blood pressure.

A. Aortic and carotid artery baroreceptors
B. Medulla
C. Arteriole endothelium
D. Hypothalamus
E. Pancreas

13. The **integrating center** that responds to changes in arterial blood pressure by sensors in question 12 above.

A. Aortic and carotid artery baroreceptors
B. Medulla
C. Arteriole endothelium
D. Hypothalamus
E. Pancreas

14. When body temperature is too low, these effectors respond to hypothalamic stimulation to warm up the body.

A. Anterior nucleus.
B. Heart muscle.
C. Skeletal muscles.
D. Sweat glands.

15. When body temperature is too high, these effectors respond to hypothalamic stimulation to cool the body.

A. Anterior nucleus.
B. Heart muscle.
C. Skeletal muscles.
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. In the negative feedback regulation of body temperature, which receptors sense when body temperature is outside of normal range?

A. Cervix stretch receptors
B. Touch/pressure receptors in the nipple
D. Thermoreceptors
E. Baroreceptors in the aortic arch & carotid arteries

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
B. Skeletal muscles
C. Arterial endothelium
D. Digestive smooth muscle
E. Heart
F. Bronchiole smooth muscle
G. Answers B & C
H. Answers C & E
I. Answers A & B

Ch 1. Answers:

1. A
2. C
3. C & D
4. C
5. A
6. C
7. C & E
8. A
9. B & D
10. B
11. A
12. A
13. B
14. C
15. D
16 B
17. A
18. D
19. B
20. H

How did you do?