Excretory Lecture Test Questions – Set 3

1. An increase in permeability of cells of the last portion of the distal convoluted tubule and collecting tubule to water is due to:
   a. a decrease in the secretion of ADH (antidiuretic hormone)
   b. aldosterone
   c. pancreatic amylase
   d. an increase in the secretion of ADH
   e. none of the above, since these portions are impermeable to water

2. Which of the following would tend to decrease the osmotic pressure of body fluids:
   a. ADH hyper-secretion
   b. diarrhea or vomiting
   c. hyperglycemia
   d. aldosterone hyper-secretion with no ADH change
   e. increased solute ingestion

3. Which of the following would tend to increase the osmotic pressure of body fluids:
   a. fluid loss from diarrhea or vomiting
   b. hyperglycemia
   c. aldosterone hyper-secretion with no ADH change
   d. increased solute ingestion
   e. all of the above

4. Elevated osmotic pressure of body fluids should cause:
   a. increased ADH secretion
   b. decreased ADH secretion
   c. no change in ADH secretion
   d. increased renin secretion
   e. decreased renin secretion

5. Osmotic pressure is monitored in the:
   a. juxtaglomerular apparatus
   b. liver
   c. hypothalamus
   d. vasa recta
   e. spinal cord

6. A total urine output of 200 ml per day could best be explained as:
   a. abnormally low level of ADH
   b. abnormally high level of ADH
   c. normal in children
   d. normal in adults
   e. none of the above

7. Which of the following would tend to decrease the body fluid volume:
   a. congestive heart failure
   b. ADH hyper-secretion
   c. diuretic drugs
   d. aldosterone hyper-secretion
   e. increase water ingestion

8. Which of the following would cause an increase in the extra-cellular volume:
   a. decreased ingestion of solutes and water
   b. diuretic drugs
   c. excessive perspiration
   d. aldosterone and/or ADH hypo secretion
   e. none of the above

9. Which of the following would cause an increase in the urine volume:
   a. diarrhea
   b. vomiting
   c. ADH hypo-secretion
   d. decreased water ingestion
   e. none of the above

10. Which of the following will tend to increase the extra-cellular fluid and blood volume:
   a. diarrhea
   b. vomiting
   c. excessive perspiration
   d. ADH hypo-secretion
   e. none of the above

11. Pathologically insufficient ADH secretion produces:
   a. micturition
   b. diabetes insipidus
   c. tubular secretion
   d. ketonuria
   e. incontinence

12. Diabetes insipidus is:
   a. caused by a lack of insulin production
   b. characterized by a large output of dilute urine
   c. decreased urine production
   d. high blood glucose
   e. both "a" and "d" above

13. Elevated volume of body fluids should cause:
   a. decreased aldosterone and ADH secretions
   b. increased aldosterone and ADH secretions
   c. no change in aldosterone, but an increase in ADH secretion
   d. decreased aldosterone secretion, but no change in ADH
   e. none of the above

14. Lowered volume of body fluids should cause:
   a. decreased aldosterone and ADH secretions
   b. increased aldosterone and ADH secretions
   c. no change in aldosterone, but a decrease in ADH secretion
   d. decreased aldosterone secretion, but no change in ADH
   e. none of the above

15. High blood pressure could cause:
   a. decreased aldosterone secretion
   b. increased aldosterone secretion
   c. no change in aldosterone secretion

d. decreased sodium tubular reabsorption
e. none of the above

16. Which of the following sequences is correct:
a. renin-aldosterone-angiotensinogen-angiotensin
b. renin-angiotensinogen-angiotensin-aldosterone
c. aldosterone-angiotensin-angiotensinogen-renin
d. angiotensin-angiotensinogen-renin-aldosterone
e. angiotensinogen-angiotensin-renin-aldosterone

17. Decreased aldosterone and ADH secretion would be in response to:
a. elevated volume of body fluids
b. lowered volume of body fluids
c. increased osmotic pressure of body fluids
d. decreased osmotic pressure of body fluids
e. insufficient hydrogen ion secretion

18. An extreme lowering of body fluid volume should cause:
a. increased renin secretion
b. increased angiotensinogen conversion to angiotensin I
c. increased aldosterone secretion
d. increased ADH secretion
e. all of the above would occur

19. The electrolytes of the body fluids function in:
a. water distribution
b. osmotic pressure maintenance
c. acid/base balance
d. neuromuscular irritability
e. all of the above

20. The pH of body fluids is maintained by:
a. carbon dioxide excretion via the lungs
b. buffering systems, utilizing bicarbonates, phosphates and proteins
c. kidney excretion of bicarbonate
d. sodium-ion reabsorption, which causes hydrogen-ion secretion
e. all of the above

21. Which of the following is primarily excreted in the feces:
a. glucose
b. calcium
c. sodium
d. water
e. chloride

22. The principle function of calcium:
a. extra-cellular osmotic pressure
b. intracellular osmotic balance
c. membrane stabilization
d. acid/base balance
e. enzyme activation

23. An important function of chloride:
a. extra-cellular osmotic balance
b. cell membrane stabilization
c. enzyme activation

d. counteraction of negative ions
e. counteraction of positive ions