Chapter 16 - The Urinary System

1) What enzyme produced by the juxtaglomerular apparatus of nephrons converts angiotensinogen to another protein called angiotensin I?

2) An infection of the kidneys due to bacteria migrating from the bladder through the ureters to the kidneys is referred to as _______________________.

3) Which hormone reduces blood volume and pressure as well as increasing urine volume?

4) The hormone whose activity is reduced due to the presence of caffeine is ____________.

5) An abrupt cessation of kidney function is called _________________________________.

6) Thick, smooth muscle located at the junction of the bladder and urethra that aids in pushing stored urine into the urethra is called the _________________________________.

7) The hormone erythropoietin (EPO) acts to stimulate cells that are located in the ________________ of an adult.

8) A hormone secreted by the hypothalamus that regulates the amount of water reabsorbed by the distal convoluted tubules and the collecting ducts of the nephrons is known as _____________________________.

9) What disease is characterized by the excretion of large amounts of dilute urine caused by a deficiency of ADH?

10) What hormone regulates the reabsorption of sodium by the distal convoluted tubules and collecting ducts?

11) A region of the nephron that regulates the blood pressure in the afferent arteriole, which causes the stimulation and release of aldosterone is the _________________________________.

12) The nephron is under hormonal control for sodium and water reabsorption at the _________________________________.

13) The urinary system of humans is capable of removing excess amounts of all the following materials from the blood except:
   1. Water
   2. Hydrogen ions
   3. Urea
   4. Plasma proteins

14) A person has glucose in his or her urine as determined by a urinalysis. The area of the nephron that must be malfunctioning to allow glucose to be passed into the urine is the _________________________________.
15) One of the problems associated with eating high amounts of protein in the diet is the production of large amounts of _________________ by the cells.

16) What is important about Na\(^+\) and Cl\(^-\) in the nephron?

17) Under the influence of atrial natriuretic hormone (ANP), you would expect to see
_____________________________________________________________ and
______________________________________________________________.

18) Complications associated with kidney failure are:
   1. An inability to remove toxins from the blood.
   2. An inability to regulate blood pH.
   4. All are complications associated with kidney failure.

19) A person has been stranded for forty-eight hours with virtually no drinking water. All of the following would be expected but which one of the following:
   1. An increase in plasma volume.
   2. A decrease in urine volume.
   3. An increase in antidiuretic hormone (ADH) secretion.
   4. An increase in aldosterone secretion.