Excretory Lecture Test Questions – Set 4

1. The majority of urine solutes will normally be nitrogenous.

2. The majority of urine solutes will normally be carbohydrates.

3. Urea is formed within the liver, from deamination of amino acids.

4. Creatinine is formed within the liver from deamination of amino acids.

5. Excretion is the elimination of metabolic waste products from the body.

6. Blood is originally supplied to the nephron by a network of capillaries, the vasa recta.

7. Blood is originally supplied to the nephron by a network of capillaries, the glomerulus.

8. If a fluid flows through a tube whose diameter becomes smaller the pressure will decrease.

9. If a fluid flows through a tube whose diameter becomes smaller the pressure will increase.

10. Blood pressure within the glomerulus is normally sufficient force to filter fluid into Bowman's capsule, since it is higher than the opposing pressures from the blood proteins and capsule.

11. Tubular secretion is essentially the same as reabsorption, but in reverse.

12. Tubular secretion is essentially the reverse of filtration.

13. Plasma proteins are normally freely filtered.

14. Glucose is completely reabsorbed, regardless of its concentration in the blood.

15. Glucose is completely reabsorbed, up to a maximum blood concentration.

16. No nitrogenous wastes are excreted by the lungs.

17. Reabsorption of a substance will cause it to be excreted.

18. Juxtamedullary nephrons are more numerous than cortical nephrons.

19. Secretion of a substance will cause it to be excreted.

20. Toxins such as ammonia are secreted.

21. Except during strenuous exercise, most water excretion is by the kidneys.

22. Active water transport is not possible.

23. Active water transport is an important excretory mechanism.

24. Two parallel sections of the nephron or collecting system will always contain the same concentration of one substance at adjacent parts of each section.

25. Two parallel sections of the nephron or collecting system will always contain the opposite concentration of one substance at adjacent parts of each section.

26. The maintenance of medullary fluid concentration is essential to counter-current operation.

27. A counter-current exchange system for the nephron exists with the vasa recta.

28. In the descending limb of Henle water diffuses in and sodium diffuses out due to the net effects of the vasa recta and the adjacent ascending limb.

29. In the descending limb of Henle water diffuses out and sodium diffuses in due to the net effects of the vasa recta and the adjacent ascending limb.

30. In the lowest point of the loop of Henle the filtrate is hypoosmotic to the original capsular filtrate.

31. In the lowest point of the loop of Henle the filtrate is hyperosmotic to the original capsular filtrate.

32. In the lowest point of the loop of Henle the filtrate is iso-smotic to the original capsular filtrate.

33. In the beginning of the distal convoluted tubule the filtrate has become hyperosmotic to the original capsular filtrate.

34. In the beginning of the distal convoluted tubule the filtrate has become hypoosmotic to the original capsular filtrate.

35. In the beginning of the distal convoluted tubule the filtrate has become iso-osmotic to the original capsular filtrate.

36. The ascending limb of the nephron is impermeable to water.

37. The greatest water concentration should be in the proximal convoluted tubule.

38. Amino acids will always follow transported sodium.

39. When possible, sodium and chloride always follow transported water.

40. The counter current mechanism involves the juxtamedullary nephrons.

41. Micturition is a condition resulting from proteins in urine.

42. Micturition is a condition resulting from hyperosmotic body fluids.

43. Micturition is the term for elimination of urine from the urinary bladder.

44. Intense sympathetic impulses will decrease glomerular blood pressure.

45. Intense sympathetic impulses will increase glomerular blood pressure.

46. Increased osmotic pressure of body fluids would lead to decreased ADH secretion.

47. Increased osmotic pressure of body fluids would lead to increased ADH secretion.

48. The correction for lowered body fluid volume would require both the hypothalamus and the renin-angiotensin-aldosterone system.

49. The correction for lowered blood volume would require only the renin-angiotensin-aldosterone system.

50. Diuretics would increase fluid volume.

51. Diuretics would decrease fluid volume.

52. Water retention would cause an increase in osmotic pressure of body fluids.

53. Water retention would cause a decrease in osmotic pressure of body fluids.

54. Glomerular blood pressure would increase if the efferent arteriole were constricted.

55. Glomerular blood pressure would decrease if the afferent arteriole were dilated.

56. If the overall systemic blood pressure changes, the kidneys can undergo independent adjustment.

57. Solute retention would cause the osmotic pressure of body fluids to increase.

58. Solute retention would cause the osmotic pressure of body fluids to decrease.

59. Auto-regulation can counteract the glomerular pressure effects of the sympathetic division.

60. Diabetes mellitus would produce an abnormally high volume of extremely dilute urine.

61. Osmotic pressure is sensed in the hypothalamus.

62. Potassium is preferentially handled by the kidneys at the expense of sodium.

63. Sodium is preferentially handled by the kidneys at the expense of potassium.

64. Chloride is the counter-ion for cations and positively charged proteins.

65. Bicarbonate is the counter-ion for cations and positively charged proteins.

66. Potassium is the counter-ion for cations and positively charged proteins.

67. Potassium is the primary extra-cellular cation.

68. Potassium is the primary intracellular cation.

69. Sodium is the primary extra-cellular cation.

70. Sodium is the primary intracellular cation.

71. Hyperkalemia is excessive sodium concentration.

72. Hyperkalemia is excessive potassium concentration.

73. Potassium and hydrogen ions are passively secreted due to the reabsorption of sodium.