

Biology 3350 test 5 review



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BIOL 3350 Review Test 5

1. What is the overall function of the kidneys? They control the water to electrolyte balance and remove nitrogenous waste. Regulate the inner environment of the body.
2. What are the functional units of the kidney? Nephron
3. What is the bulk of the energy used for by the kidney? Active Transport of sodium and co-transport of electrolytes and other substances.
4. Describe juxtamedullary nephrons. They penetrate the entire length of the medulla.
5. List what is absorbed in the proximal tubule. Electrolytes, amino acids, water, and glucose
6. The anti-diuretic hormone (ADH) acts on what structure(s) in the kidney? Distal and collecting tubules
7. What usually causes kidney damage resulting from urinary tract obstruction? Back pain/pressure and ischemia
8. What is the most common type of kidney stone in people with urinary tract infections? Magnesium ammonium phosphate
9. Why is Aspirin not recommended for pain relief in people with gouty arthritis? It decreases the secretion of uric acid into the renal tubules.
10. How is cranberry or blueberry juice thought to control and prevent UTIs? It reduces the bacterial adhesion epithelial of the urinary tract
11. Describe glomerulonephritis. Inflammation involving the glomerular structures. Can lead to kidney failure. Some include bacterial infections and immune diseases.
12. What does glomerulonephritis result from? An immune response
13. Describe acute proliferative glomerulonephritis. It is an increase in cellular components of the glomerulus, along with edema, oliguria, proteinuria and hematuria
14. What are the endocrine functions of the kidney? They are the activation of Vitamin D and production of erythropoietin.
15. What is a substance normally found in urine that closely reflects the glomerular filtration rate? Creatinine (comes from a Greek word that means Flesh)
16. Describe the Urine specific gravity test. It assesses the

ability of the kidneys to concentrate urine. Normal values 1.01 to 1.02 17. What does Aldosterone increase the reabsorption of and what does anti-diuretic hormone (ADH) increase the reabsorption of? Aldosterone increases absorption of Na^+ . ADH increases absorption of H_2O 18. What type of renal response is given for people who eat high-protein meals or have high glucose levels in their blood? It increases in renal blood flow and GFR (Glomerular Filtration Rate) 19. What is the most common complication with urinary tract obstruction? Infections. Acute Distyus or Bladder Infection are most common. 20. What is the most common inherited disease that affects the kidneys? Polycystic kidney disease 21. What is a characteristic sign of polycystic kidney disease? Enlarged Kidneys 22. What blood test is used to detect the glomerular filtration rate (GFR) and renal function? Creatinine in the blood. 23. What are the effects of kidney agenesis or hypoplasia if it affects one kidney in the body? A few to none at all. 24. Describe the effects of cystic disease on the kidney. Tubular dilation: caused by weakened tubule structures Tubular obstructions (that increase intro-tubular pressure) in the basement membrane of the renal tubules. 25. What prevention measure can be used to prevent all types of kidney stones? To increase your fluid intake. 26. Which population is least susceptible to urinary tract infections? Adolescent boys 27. What is the most common cause of nosocomial urinary tract infections? Nosocomial, this is hospital originated Cauterization 28. What are the symptoms of lower urinary tract infections (UTIs)? Enuresis, Dysuria, Subrubic discomfort, frequency 29. Edema that develops in people with glomerulonephritis and nephrotic syndrome indicate what? The loss of Plasma Proteins 30. What is the location and the function of the juxtaglomerular apparatus. It is located at the point of contact between the

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distal convoluted tubule and the afferent and efferent arterioles - Regulate each Nephron. 31. The most frequent causes of intrarenal failure are: 1. Acute tubular necrosis. 2. Hypoxia; related to renal failure. 3. Exposure to nephrotoxic poisonous substances. 32. What can cause the interruption of renal blood flow? Shock and trauma can cause an interruption. 33. Describe acute tubular necrosis. Destructive changes in tubular epithelium: This is one of the most common causes of acute renal failure. 34. What causes the majority of acute tubular necrosis? Nephrotoxic agents, ischemia 35. End-stage renal disease is characterized by what alterations? Alterations in filtration and reabsorption, Endocrine functions of Kidney 36. What is an early sign of renal failure? An increase of nitrogenous wastes in the blood. 37. Describe nocturia and its symptoms? Urination at night, the inability to concentrate urine. 38. What is the moving force of filtration? Blood pressure in the glomerulus 39. What causes anemia? Impaired synthesis of erythropoietin and effect of uremia. 40. What can cause the development of hypertension in a person with renal failure? The increase of intravascular fluid and the rennin-angiotension mechanism. 41. Failure to empty the urine from the bladder or flaccid dysfunction is caused by what conditions? The interrupted afferent and efferent innervations of the bladder. 42. What is a common cause of flaccid bladder dysfunction? Spinal Cord Injury 43. What is the most common sign of bladder cancer? Painless Hematuria 44. What structure distal to the base of the bladder is responsible for continence? External Sphincter 45. What are the symptoms of early stages of obstruction to urine outflow from the bladder? Frequency and urgency 46. What are the main levels of neurological control of bladder function? Spinal reflex ctr., cerebral cortex, pontine micturition center, not hypothalamus 47. The reflex

control of bladder emptying occurs at what level? Sacral part of the Spinal Cord 48. What is the most common cause of urinary obstruction in males? Benign prostatic hyperplasia 49. What can cause the failure to store urine? Reflex bladder spasm, decrease of bladder volume, interference with motor innervation 50. What can happen as a result of a stroke that affects the cortex or corticospinal pyramidal tract? Ability to know when the bladder is filling is lost. Voiding occurs suddenly and without warning.