

Grade: L3 Animal biology and physiology
Duration: 90 minutes
Date: 12/05/2025

Name:.....
Group:.....

Scientific English Exam

The urinary tract, also known as the urinary system, plays a crucial role in maintaining homeostasis by regulating the body's fluid and electrolyte balance, removing metabolic waste products, and controlling blood pressure and pH. The urinary system consists of the kidneys, ureters, bladder, and urethra. Each kidney contains millions of filtering units called nephrons, where blood is filtered to remove excess water, salts, and nitrogenous wastes such as urea, creatinine, and uric acid. This filtration process results in the formation of urine, which is then transported via the ureters to the bladder, a muscular sac that stores urine temporarily. When the bladder becomes full, urine is excreted through the urethra in a process called micturition. In addition to excretion, the urinary tract regulates blood pressure by releasing the enzyme renin, which initiates the renin-angiotensin-aldosterone system (RAAS). Several health conditions can impair the urinary system. Urinary tract infections (UTIs), often caused by bacteria like *Escherichia coli*, can lead to painful urination and kidney complications if untreated. Kidney stones, formed from minerals like calcium oxalate, can obstruct urine flow and cause severe pain. More serious conditions like chronic kidney disease (CKD) affect kidney function over time and may require dialysis or transplantation.

Questions:

Part one. Comprehension

Answer the following questions according to the text:

1. What type of scientific text is this? *Explanatory* (1)
2. Mention two functions of the urinary tract.
1. Maintaining homeostasis by regulating the body's fluid and electrolyte balance.
2. Removing waste products and controlling blood pressure and pH.
3. Identify one component of urine and one disorder affecting the urinary system:
 - o ☒ A. Creatinine and kidney stones (1)
 - o B. Glucose and diabetes
 - o C. Urea and anemia
 - o D. Erythropoietin and arthritis

4. True or False:

- The bladder filters blood to produce urine. *False* (1)
- The urinary tract helps regulate blood pressure and pH. *True* (1)
- Urinary tract infections can lead to serious complications if untreated. *True* (1)

5. Choose the correct synonym from the text:

a/ Eliminate = *remove* (1)

b/ Essential = *crucial* (1)

