



Kidneys

2014

13 In humans, the water content in the blood is regulated via the hormonal system.

Which of the following occur when the water content of the blood is too low?

- 1 pituitary gland releases less ADH
 - 2 pituitary gland releases more ADH
 - 3 increase in water reabsorption by the kidneys
 - 4 decrease in water reabsorption by the kidneys
 - 5 increased reabsorption of glucose in the kidneys
 - 6 decreased reabsorption of glucose in the kidneys
-
- A 1 and 3 only
 - B 2 and 3 only
 - C 1 and 4 only
 - D 2 and 4 only
 - E 1, 3 and 5 only
 - F 2, 4 and 6 only
 - G 1, 4 and 5 only
 - H 2, 3 and 6 only



Kidneys

2015

- 13 A human consumes the same amount and type of food and drink on two consecutive days. He also does the same activities on both days. However, one of the days is hot and the other is cold.

Which row in the table correctly shows the mass of two substances found in the urine of this human on the hot day compared with the cold day?

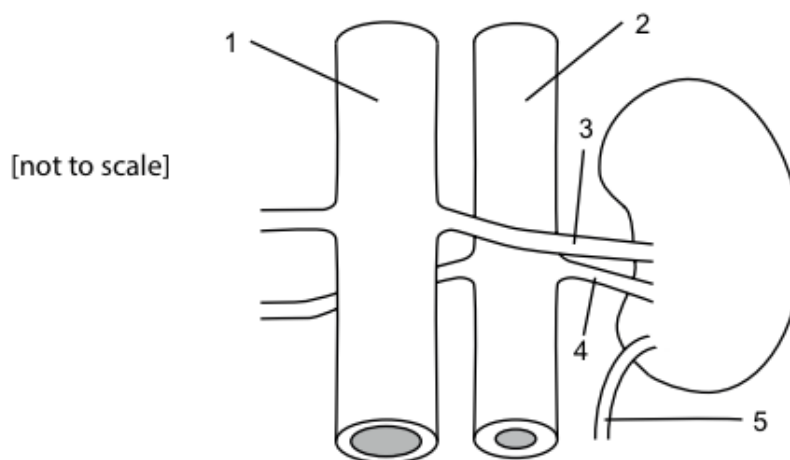
	<i>Mass of substance found in urine on a hot day compared with a cold day</i>	
	<i>water</i>	<i>urea</i>
A	less	less
B	less	same
C	less	more
D	same	same
E	same	more
F	more	less
G	more	same
H	more	more



Kidneys

2016

1 The diagram shows a kidney and its associated vessels from a healthy individual.



Which row correctly identifies the vessels along with the concentration of urea they contain?

	<i>lowest concentration of urea</i>	<i>highest concentration of urea</i>
A	1 is the aorta	2 is the vena cava
B	1 is the vena cava	2 is the aorta
C	3 is the renal artery	5 is the urethra
D	3 is the renal vein	5 is the ureter
E	4 is the renal vein	5 is the ureter
F	4 is the renal artery	5 is the urethra



Kidneys

2019

- 25** A student carried out tests to find out which molecules were present in a sample of urine from a human male. The student recorded the presence of large protein molecules in the urine, and suggested that this indicated that the kidney was not functioning correctly.

Which of the following could have resulted in a high concentration of protein in the urine sample?

- 1** damage to cell membranes between the blood vessels and the Bowman's capsule
 - 2** a reduced rate of active transport and selective re-absorption from the nephron
 - 3** Cells in the collecting duct do not have receptors to bind to antidiuretic hormone (ADH) and so are unable to respond to the hormone.
- A** none of them
- B** 1 only
- C** 2 only
- D** 3 only
- E** 1 and 2 only
- F** 1 and 3 only
- G** 2 and 3 only
- H** 1, 2 and 3