

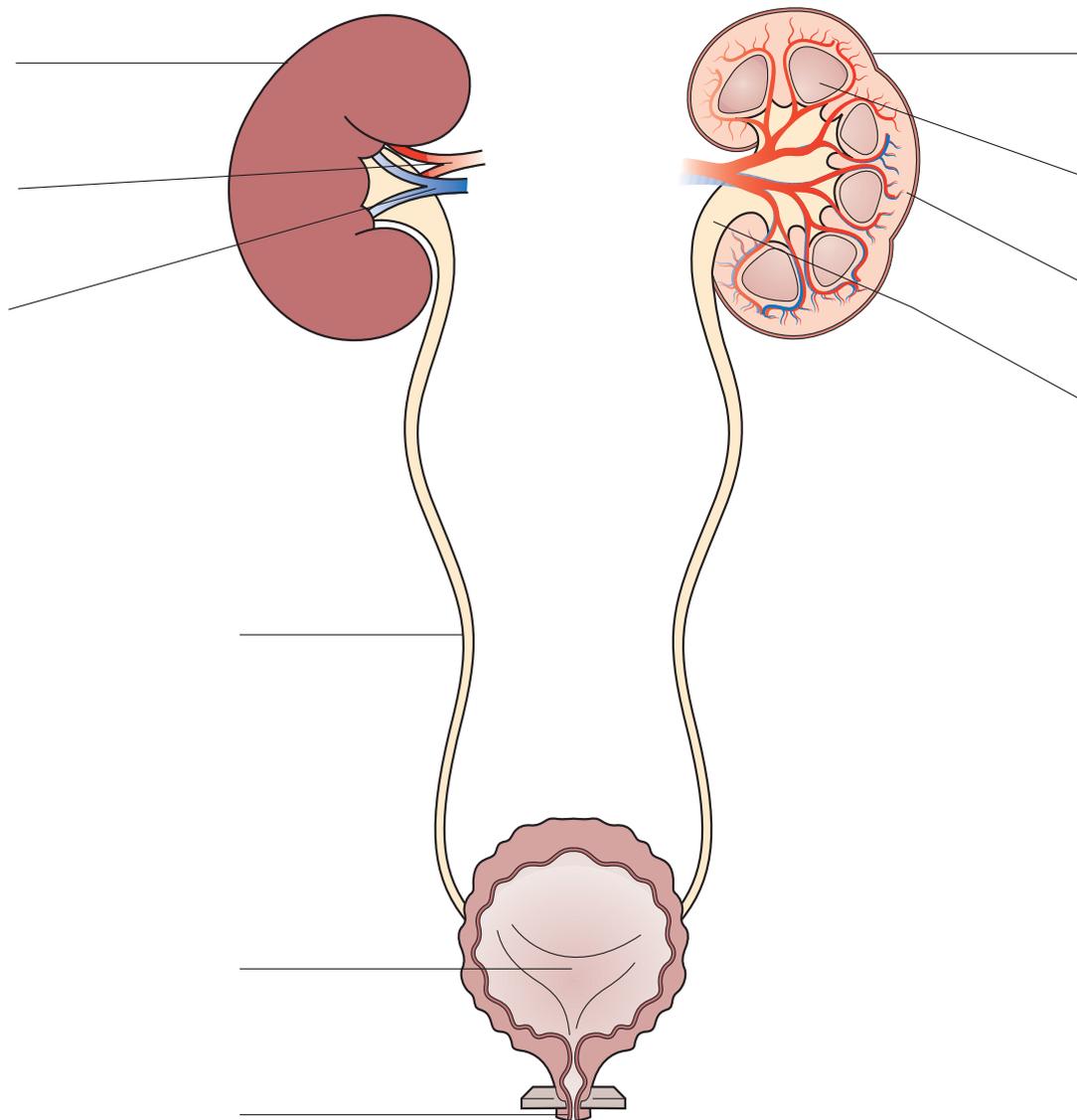
Activity 1

Label the following diagram of the urinary organs.

Ureter
Bladder
Right kidney
Left kidney

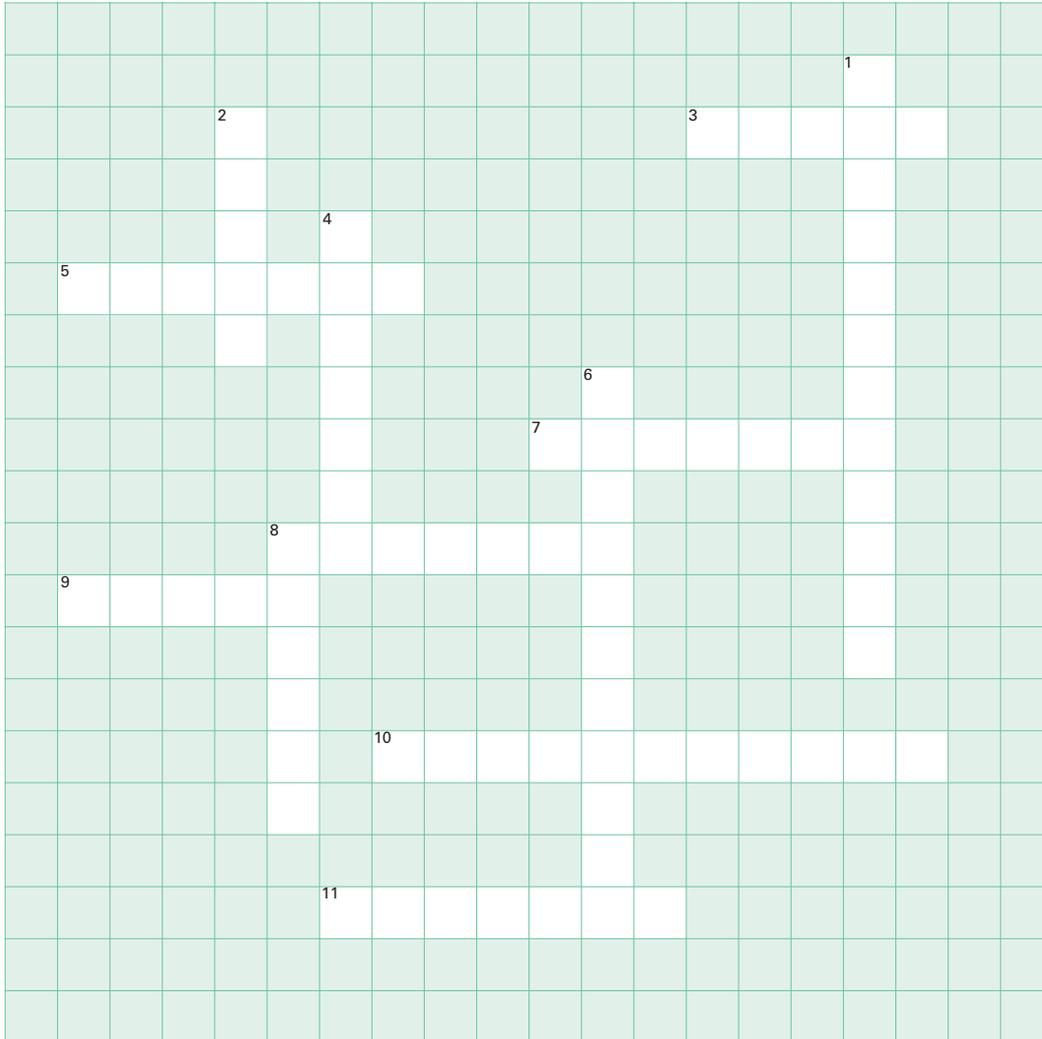
Renal artery
Renal vein
Renal pelvis

Medulla
Cortex
Urethra



Activity 2

Complete the crossword.



Across

3. concentrated filtrate from kidneys
5. part of kidney containing renal pyramids
7. tiny blood filtration units inside kidney
8. canal extending from neck of bladder to exterior
9. urine contains approximately 96% of this
10. blood to be processed enters the kidney via this blood vessel (5, 6)
11. tissue supporting kidneys

Down

1. inability to control urine voluntarily
2. medial border of kidney
4. stores urine
6. funnel-shaped structure where urine is collected (5, 6)
8. transports urine from kidney to bladder

Activity 3

Put the following into the correct order by which processed blood is passed through the kidney from filtration to selective reabsorption and collection.

Bowman's capsule

Loop of Henle

Renal pelvis

Collecting duct

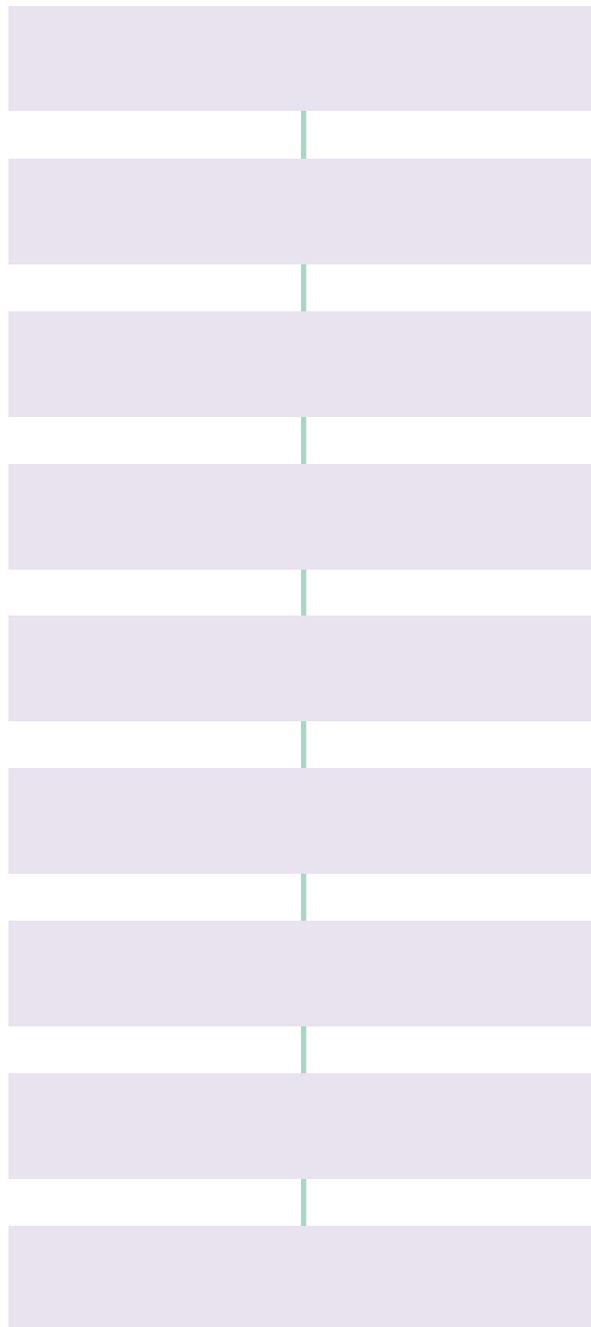
Medulla

Ureter

Distal convoluted tubules

Proximal convoluted
tubules

Glomerulus



Activity 4

Match the key words to the definitions in the box.

Antidiuretic hormone

Micturition

Urethra

Bowman's capsule

Detrusor

Hilus

Cystitis

Medulla

Pelvis

Renal veins

Key words	Definitions
	Large cavity in centre of kidney that collects urine and drains it into ureter
	Physiological process of urination
	Region of kidney containing renal pyramids
	Part of nephron encasing the glomerulus
	Vessels draining filtered blood away from kidneys
	Area of kidney where renal blood vessels leave and enter kidney
	Inflammation of the bladder usually caused by infection of bladder
	Controls amount of water reabsorbed from kidney tubules into blood
	Exit pathway for urine
	Muscle in wall of bladder that is voluntarily relaxed to allow micturition

Activity 5

Complete the following by filling in the blanks with the words listed below.

capsule
adipose
cortex
filtered

medulla
pyramids
reabsorbed

pelvis
urine
ureter

hilus
filtration
nephrons

A kidney has an outer fibrous renal _____ and is supported by _____ tissue.

It has two main parts: the outer _____, which is reddish-brown, and is the part where fluid is _____ from blood, and the inner _____, which is paler in colour and is made up of conical-shaped sections called renal _____.

This is the area where some materials are selectively _____ into the bloodstream.

There is a large area in the centre of the kidney called the renal _____, which is a funnel-shaped cavity that collects _____ from the renal pyramids in the medulla and drains it into the _____.

The medial border of the kidney is called the _____, and is the area where the renal blood vessels leave and enter the kidney.

The cortex and the medulla contain tiny blood _____ units called _____, which extend from the renal capsule through the cortex and medulla to the cup-shaped renal pelvis.

Multiple-choice questions – Student book, p303

1. The function of the kidneys is

- a) filtering of impurities from the blood
- b) regulation of water and salt balance
- c) formation of urine
- d) all of the above

2. Which of the following is not considered an excretory organ?

- a) digestive
- b) skin
- c) muscular
- d) respiratory

3. Blood is filtered inside which section of the kidney?

- a) glomerulus
- b) Bowman's capsule
- c) loop of Henle
- d) proximal convoluted tubule

4. The blood filtration unit inside a kidney is known as

- a) hilus
- b) renal pyramid
- c) nephron
- d) medulla

5. Which of the following best describes the position of the kidneys?

- a) Posterior of abdomen, between the level of 12th thoracic and 5th lumbar vertebrae
- b) Posterior of thorax, between the level of 12th thoracic and 5th lumbar vertebrae
- c) Posterior of abdomen between the level of 12th thoracic and 3rd lumbar vertebrae
- d) Posterior of thorax, between the level of 12th thoracic and 3rd lumbar vertebrae

6. Which of the following statements is TRUE?

- a) Filtered blood leaves the kidney via the renal artery
- b) Excess water, salts and urea are all filtered and processed through the kidneys
- c) Blood to be processed enters the medulla from the renal vein
- d) The renal artery splits into a network of capillaries called the Bowman's capsule

7. The hormone responsible for controlling water reabsorption in the kidneys is

- a) insulin
- b) antidiuretic hormone (ADH)
- c) oxytocin
- d) adrenocorticotrophic hormone

8. The function of the ureter is to

- a) propel urine from the bladder to the exterior
- b) store urine
- c) filter impurities
- d) propel urine from the kidneys to the bladder

9. The bladder is situated

- a) in the abdominal cavity behind the intestines
- b) in the pelvic cavity behind the symphysis pubis
- c) on the posterior of the abdominal cavity
- d) behind the urethra

10. The condition cystitis commonly affects females as

- a) women tend to have a weaker bladder than men
- b) women have a shorter urethra
- c) women have shorter ureters
- d) women have smaller kidneys

11. Which of the following factors affects fluid balance?

- a) diet
- b) body temperature
- c) blood pressure
- d) all of the above

12. Which of the following also serves as a conducting channel for semen in the male?

- a) ureter
- b) urethra
- c) bladder
- d) none of the above