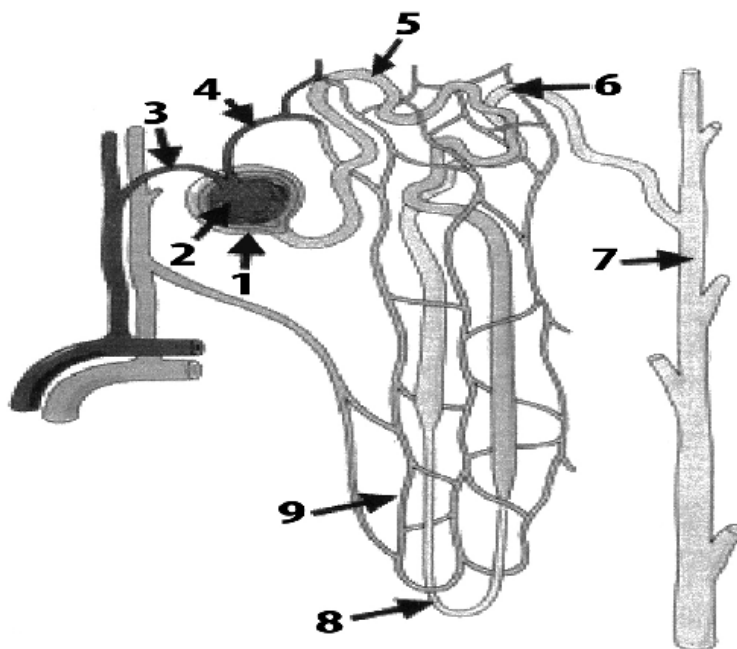


## Question 1

12. (a) (i) What is meant by the term *excretion*?  
 (ii) Mention **one** method of excretion in flowering plants. (9)
- (b) (i) Draw a large labelled diagram of a vertical section through a human kidney. Label the following parts of your diagram: cortex, medulla, pelvis.  
 (ii) Indicate clearly on your diagram where re-absorption takes place.  
 (iii) 1. Name the blood vessel that supplies blood to a kidney.  
 2. From which blood vessel does the blood vessel referred to in (iii)1 arise?  
 (iv) In which cavity of the body are the kidneys located?  
 (v) Name **one** substance, other than water, excreted in the urine.  
 (vi) Give a feature of the kidney which indicates that it is an exocrine gland. (27)



- (c) (i) The diagram above shows the structure of a nephron and its associated blood supply.  
 1. Name the parts numbered 1 to 6.  
 2. Indicate clearly by number where filtration takes place.  
 3. Name the hormone associated with changing the permeability of the structure at 7.
- (ii) A sample of urine was found to contain protein.  
 1. Would you consider this to be normal?  
 2. Explain your answer.
- (iii) A sample of urine was found to contain glucose.  
 1. Would you consider this to be normal?  
 2. Explain your answer. (24)

## Question 2

4. Choose **each** term from the following list and place it in **Column B** to match a description in **Column A**. The first one has been completed as an example.

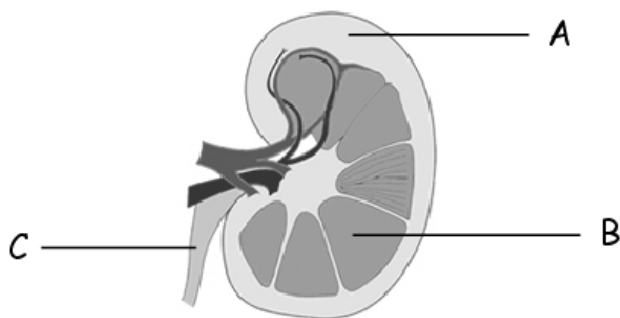
**List:** Homeostasis, Rabbit, ~~Fluid balance~~, Lizard, Endotherm, Skin

Column A	Column B
A function of the kidney	Fluid balance
(a) An <b>example of an animal</b> whose body temperature changes with its environment	
(b) A <b>term</b> for maintaining a constant internal environment in the body	
(c) An <b>organ</b> that has a role in maintaining a constant internal environment in the body	
(d) A <b>term</b> for an animal that generates its own body heat	
(e) An <b>example of an animal</b> that generates its own body heat	

## Question 3

(15)

- (b) The diagram shows a vertical section through a human kidney.



- (i) Name the parts labelled A, B and C.
- (ii) Which organ is attached to the kidney by part C?
- (iii) In which of the three labelled parts does filtration of the blood occur?
- (iv) Explain the term *excretion*.
- (v) Name **two** substances excreted by the kidneys.
- (vi) Give **two** other excretory organs in the human body.

(30)