Excretion

Question Paper

Level	O Level
Subject	Biology
Exam Board	Cambridge International Examinations
Topic	Excretion
Sub Topic	
Booklet	Question Paper

Time Allowed: **33 minutes**

Score: **/27**

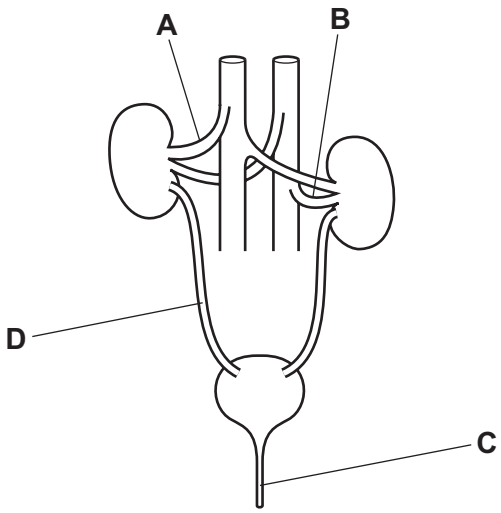
Percentage: **/100**

1 What is correct for the formation of urea?

	formed from	formed in
A	amino acids	kidney
B	amino acids	liver
C	carbohydrate	kidney
D	carbohydrate	liver

2 The diagram shows the human urinary system.

Which labelled structure is the ureter?



3 Where are most nitrogen compounds excreted from humans?

A kidneys

B liver

C rectum

D skin

4 Why is glucose found in the urine of diabetics?

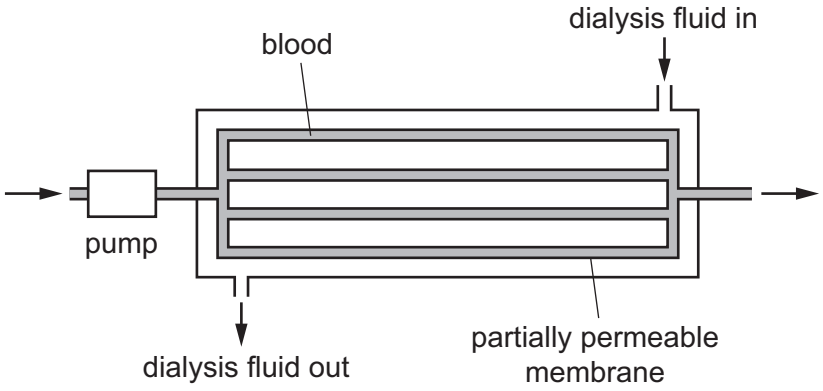
A increased uptake and use of glucose by the body cells

B not enough glucose in the blood is converted to glycogen

C stored fats in the body are being oxidized

D too much glucose is absorbed by the kidney cells

5 The diagram represents a kidney machine.



Which two substances are both present in the dialysis fluid entering the machine?

A glucose and protein

B glucose and salts

C protein and urea

D urea and salts

6 Which process occurs in a kidney dialysis machine?

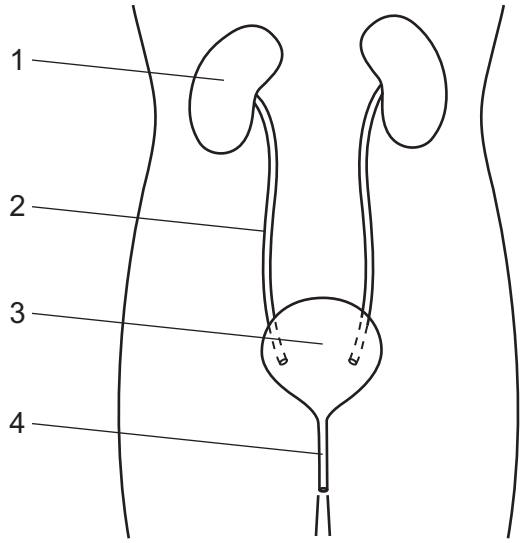
A Large protein molecules are removed from the blood plasma.

B Materials pass out of the blood down a concentration gradient.

C Oxygen is used up in removing materials from the blood.

D Pressure forces dialysis fluid into the blood.

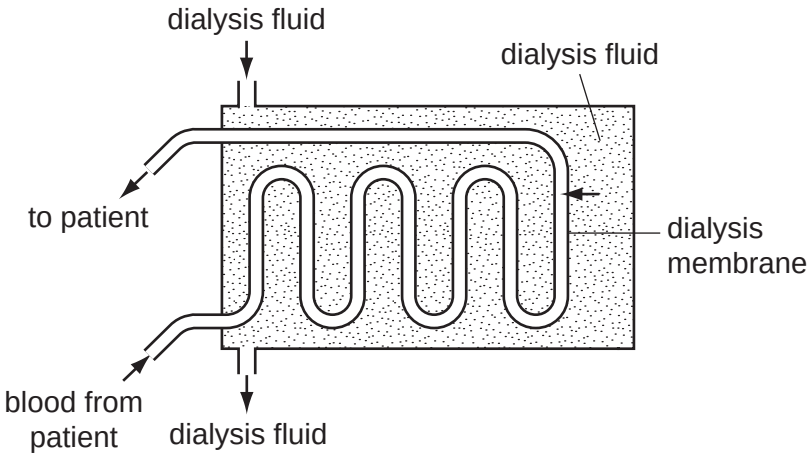
7 The diagram shows the human urinary system.



What are the correct labels for structures 1, 2, 3 and 4?

	1	2	3	4
A	bladder	ureter	kidney	urethra
B	bladder	urethra	kidney	ureter
C	kidney	ureter	bladder	urethra
D	kidney	urethra	bladder	ureter

8 In a kidney dialysis machine, which substance **cannot** diffuse through the dialysis membrane?



A glucose

B insulin

C sodium

D urea

9 In a kidney dialysis machine, which substance **will not** diffuse from the patient's blood into the dialysis fluid?

A protein

B salts

C urea

D water

10 In a kidney machine, protein molecules are not lost from the blood.

How is loss of protein prevented?

A Membranes prevent protein molecules diffusing out of the blood.

B Proteins are actively transported back into the blood.

C Proteins do not enter the kidney machine.

D The dialysis fluid contains protein, so there is no diffusion gradient.

11 Which substances can be removed from the blood by kidney machines?

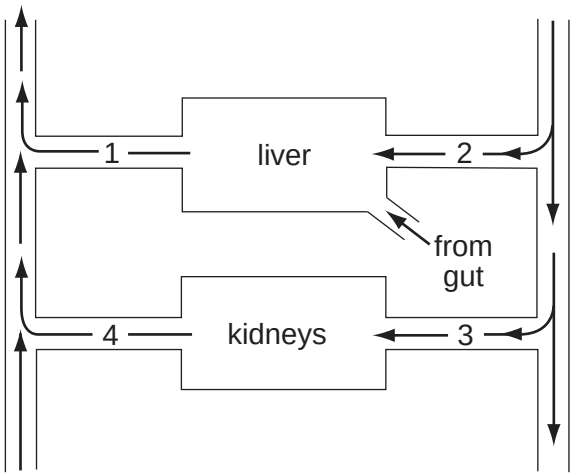
A glucose, glycogen and proteins

B glucose, proteins and urea

C glycogen, urea and some salts

D urea and some salts only

12 The diagram represents the blood supply to the liver and to the kidneys.



Which vessels contain blood with the highest and lowest concentrations of urea?

	highest	lowest
A	1	2
B	1	4
C	3	2
D	3	4

13 What is **not** an excretory product of mammals?

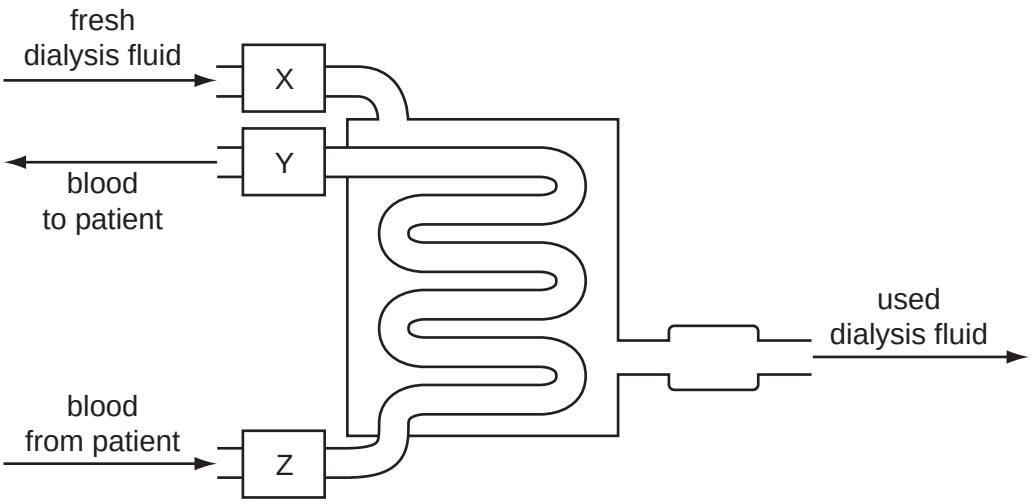
A carbon dioxide in expired air

B undigested food in faeces

C urea in sweat

D urea in urine

14 The diagram represents a kidney dialysis machine.



What are the parts labelled X, Y and Z?

	bubble trap	roller pump	water bath for temperature control
A	X	Y	Z
B	Y	X	Z
C	Y	Z	X
D	Z	Y	X

15 Which **cannot** be an example of excretion?

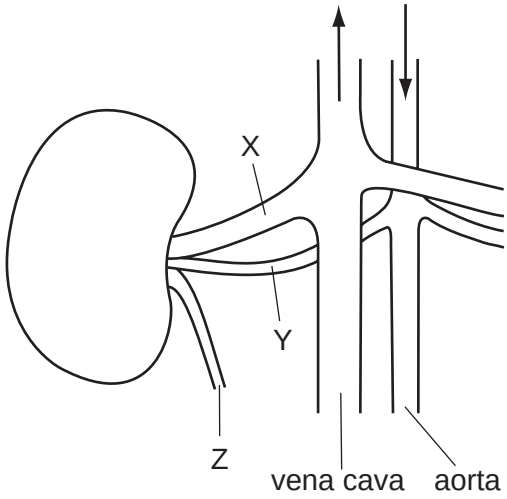
A Carbon dioxide is breathed out from the lungs.

B Undigested food leaves the body through the anus.

C Urea leaves the body in urine.

D Water is removed through the kidneys.

16 The diagram shows the structures associated with a human kidney.



What are the relative concentrations of urea in X, Y and Z?

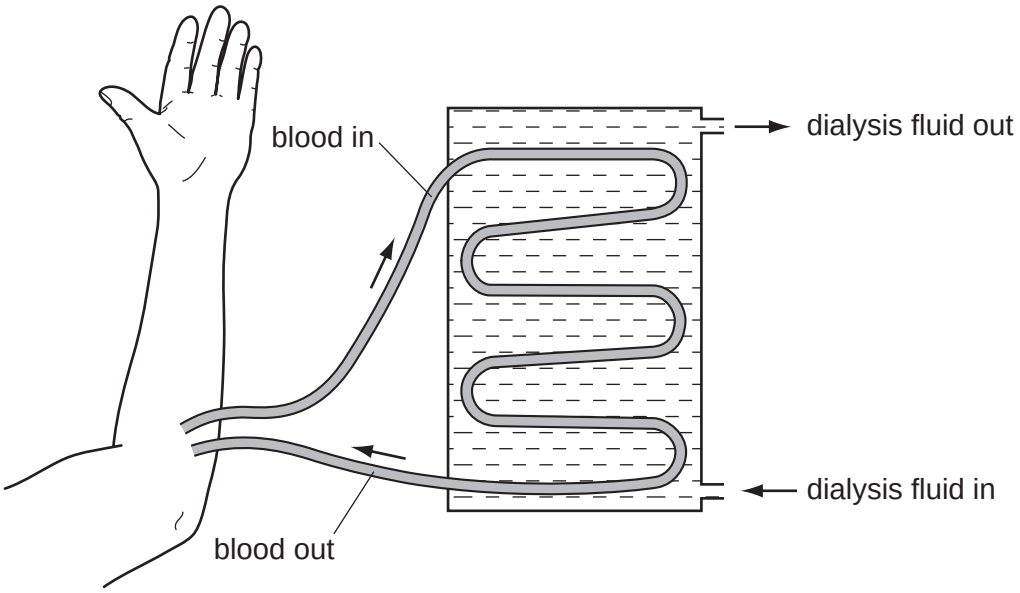
A X is sometimes higher than Y

B Y is always higher than Z

C Y is always lower than Z

D Z is sometimes lower than X

17 The diagram represents part of a kidney machine.



Which substance must be at the same concentration in the dialysis fluid and in the blood?

A glucose

B salt

C urea

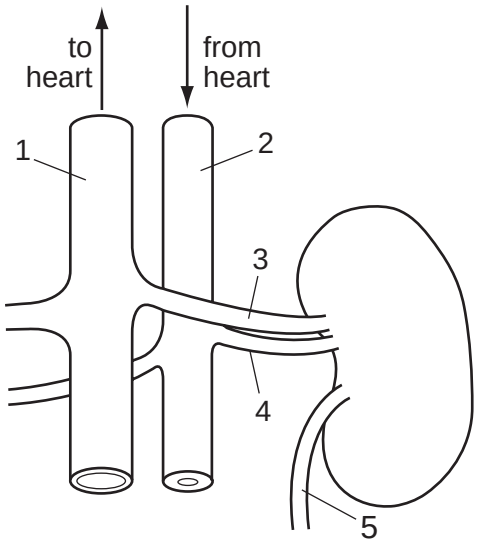
D water

18 Urea is produced in one organ, filtered from the blood by a second organ and stored inside a third organ before being expelled from the body.

Which organs carry out these functions?

	production	filtration	storage
A	kidney	bladder	liver
B	kidney	liver	bladder
C	liver	bladder	kidney
D	liver	kidney	bladder

19 The diagram shows a kidney and its associated vessels.



Which structures have the **most** and **least** urea concentrations?

	most	least
A	1	2
B	4	1
C	4	3
D	5	3

20 What is an example of excretion?

A release of adrenalin from the adrenal glands

B release of sweat from the sweat glands

C removal of carbon dioxide from the lungs

D removal of faeces from the alimentary canal

21 Urea is removed by the kidneys.

What is this process called?

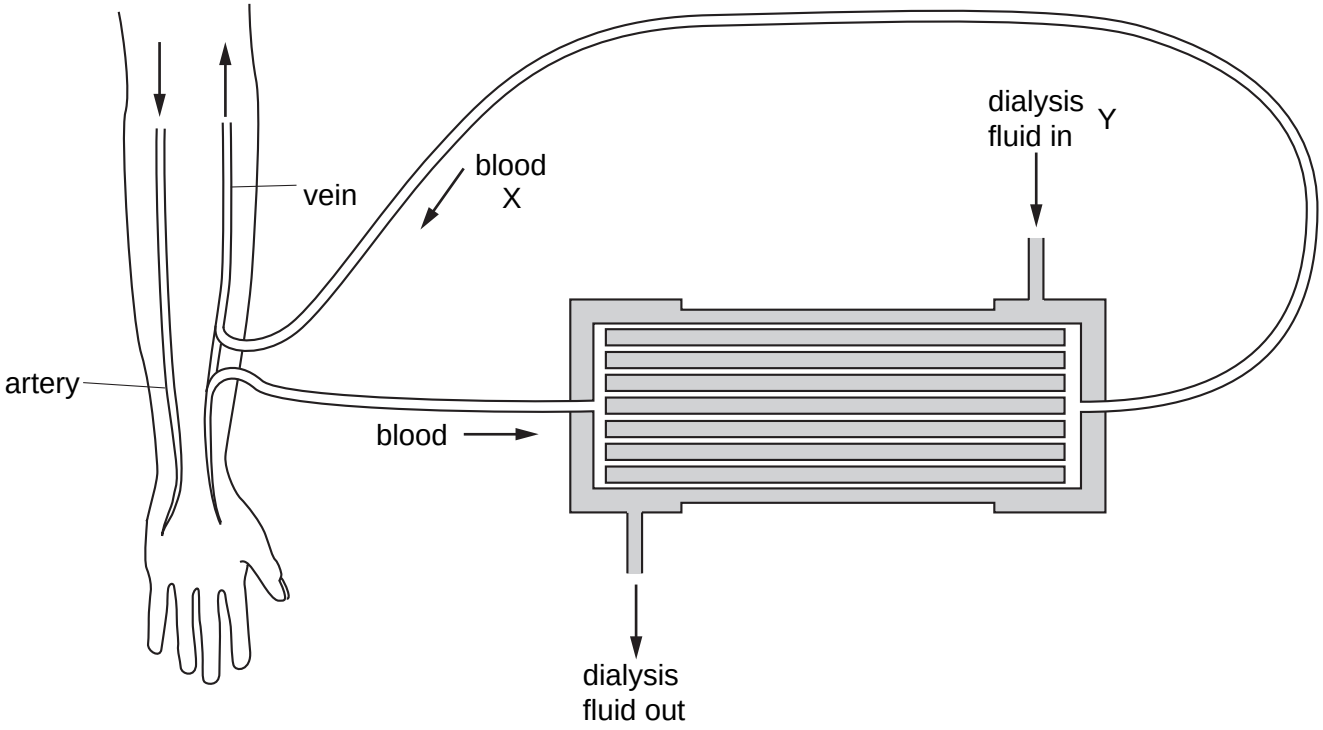
A dialysis

B diffusion

C egestion

D excretion

22 The diagram shows the flow of blood and dialysis fluid through a kidney machine.

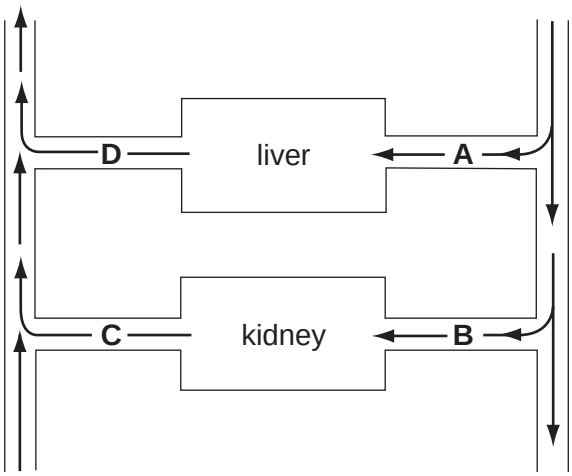


Which substances have the lowest concentration at X and the highest concentration at Y?

	lowest at X	highest at Y
A	glucose	salts
B	salts	glucose
C	urea	water
D	water	urea

23 The diagram represents the liver, kidney and some associated blood vessels.

In which vessel will the blood contain the lowest concentration of urea?



24 Which blood vessel carries blood with the **lowest** concentration of urea?

A hepatic portal vein

B pulmonary vein

C renal vein

D vena cava

25 What passes through the membranes of a kidney machine?

A protein and red blood cells

B urea and red blood cells

C water and protein

D water and urea

26 Which substance has the same concentration in dialysis fluid as in blood?

A glucose

B protein

C salts

D urea

27 The diagram shows part of the human urinary system.

Where is urea **most** concentrated?