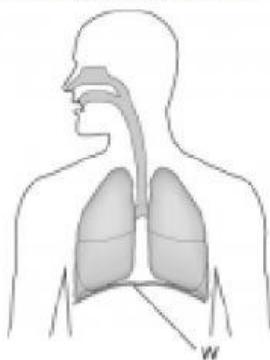


7Ca

- 1 Which is a waste product of human respiration?
A nitrogen **B** oxygen
C carbon dioxide **D** argon
- 2 What is the organ labelled W?

- 3 When you inhale, what do the muscles next to the ribs do?
A Contract to lift the ribs.
B Relax to lift the ribs.
C Contract to lower the ribs.
D Relax to lower the ribs.
- 4 What happens to a lot of the oxygen in the lungs?
A It is turned directly into nitrogen.
B It is turned directly into carbon dioxide.
C It enters the blood.
D It catches fire.

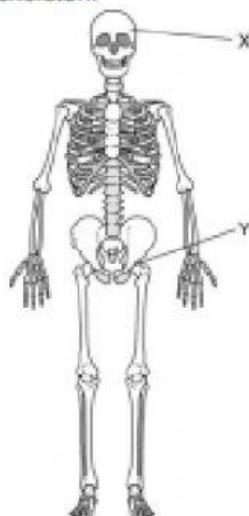
7Cb

- 1 Sandy counted 25 beats of her pulse on her wrist in 20 seconds. What was her pulse rate in beats per minute?
A 25 beats **B** 45 beats
C 75 beats **D** 500 beats

- 2 What happens to push blood out of the heart?
A The heart muscle contracts to reduce the volume in the heart chambers.
B The heart muscle relaxes to reduce the volume in the heart chambers.
C The heart muscle contracts to increase the volume in the heart chambers.
D The heart muscle relaxes to increase the volume in the heart chambers.
- 3 How is oxygen mainly carried by the blood?
A in the plasma **B** on red blood cells
C on white blood cells **D** in veins
- 4 Capillaries are adapted to their function by:
A being hollow so that they can carry air.
B having thick walls so that oxygen and nutrients cannot escape.
C having thin walls so that oxygen and nutrients can get out of the blood.
D having holes in the walls so that blood can drain out of them.

7Cc

- 1 The drawing shows the bones in a human skeleton.



What is bone X used for?

- A protection
- B movement
- C thinking
- D growing hair

2 Look at the skeleton in the last question again. What is the name of joint Y?

- A elbow
- B knee
- C shoulder
- D hip

3 Larger bones often have spaces inside them so that:

- A they can be filled with blood.
- B they can be filled with air.
- C they can be broken more easily.
- D they are lighter to move.

4 In a joint, the part that joins a muscle to a bone is called a:

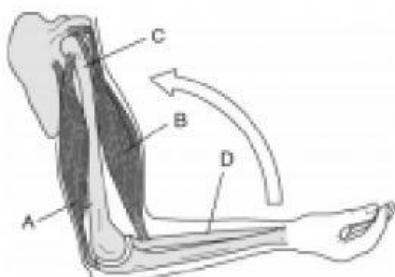
- A ligament.
- B tendon.
- C cartilage.
- D cartridge.

7Cd

1 Ravi is measuring the force of his hand grip. The units he should use to record his measurements are:

- A kilograms.
- B metres.
- C beats per minute.
- D newtons.

2 Which part of the diagram below causes a force to move the lower arm in the direction shown?



3 When standing, your quadriceps muscle swings your lower leg forwards but not backwards. Why?

- A Your lower leg can't swing backwards.
- B The quadriceps muscle can only pull in one direction.
- C The quadriceps muscle can only push in one direction.
- D The quadriceps muscle is too weak.

4 The action of muscles is controlled by:

- A blood from the circulatory system.
- B thoughts from the brain.
- C movements of the locomotor system.
- D impulses from the nervous system.

7Ce

1 A drug is:

- A a substance that affects how the body works.
- B any type of medicine.
- C a substance that harms the body.
- D any type of addictive substance.

2 Heroin is:

- A a recreational, stimulant drug.
- B a recreational, depressant drug.
- C a recreational, legal drug.
- D both a stimulant and a depressant.

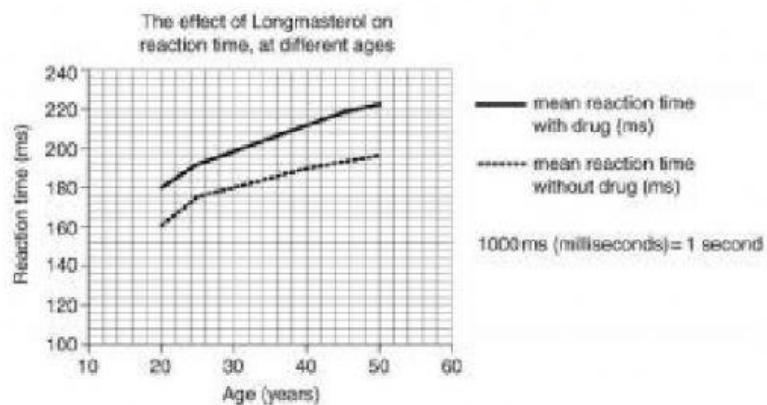
3 Which organ is most likely to be damaged by the abuse of any drug?

- A lungs
- B kidneys
- C liver
- D ovaries

4 A depressant is:

- A a chemical that speeds up your nervous system.
- B a chemical that makes you feel sad.
- C a chemical that slows down your nervous system.
- D a TV soap about day-to-day life.

A group of scientists investigate the effect of the drug Longmasterol on the reaction time of people of different ages. A graph of their results is shown below.



a Suggest what question the scientists might be trying to answer.

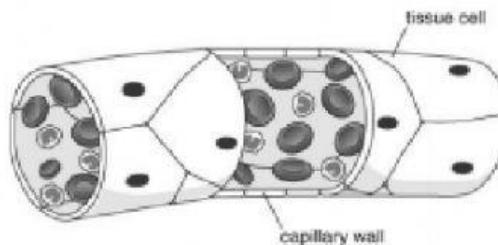
b Suggest the name of a different drug that would have a similar effect on reaction time.

c Suggest what the drug Longmasterol might do to the body to affect reaction time.

d Describe how the effect of Longmasterol changes with age.

e Explain why using Longmasterol for a long time might cause liver damage.

The diagram shows a capillary. Part of the capillary wall has been taken away to show the blood inside.



- a Choose all the red blood cells.
- b What are two substances that are carried in the plasma? Tick one box.

- A starch and glucose
- B fibre and starch
- C fibre and carbon dioxide
- D carbon dioxide and glucose

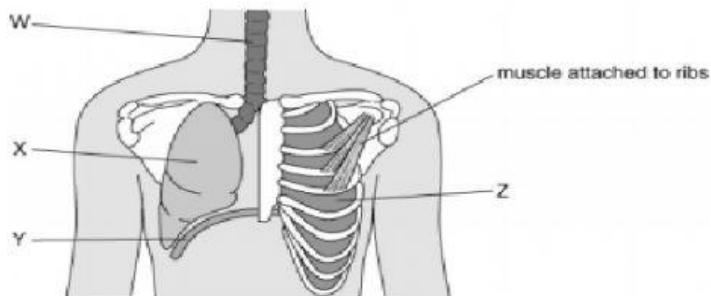
- c How is a capillary adapted to its function? Tick one box.

- A thicker wall
- B thinner wall
- C larger cells
- D smaller cells

d Describe three ways a red blood cell is adapted to its function. Choose 3 from the box below.

It has very thin walls.	It has no nucleus.	It is a fluid that allows wastes and nutrients to dissolve.
It has very thick walls.	It has a long cell.	It has haemoglobin.

Look at the diagram below. For each organ **W–Z** write down what it does and how it helps gas exchange to occur. Do not use the names of the organs (if you know them) in your answers.



Organ **W** _____

Organ **X** _____

Organ **Y** _____

Organ **Z** _____