7.1.6 Multicellular Organisms

33 minutes

45 marks

Q1. The human body has organs and organ systems which have different functions.

(a) (i) In which organ does the foetus develop?

.....

1 mark

(ii) In which organ is oxygen absorbed into the blood?

.....

1 mark

(b) Complete the table.

organ system	function in the human body
circulatory system	
..... system	this system of organs breaks down food and absorbs it into the body

2 marks

(c) Give **one** function of the skeleton.

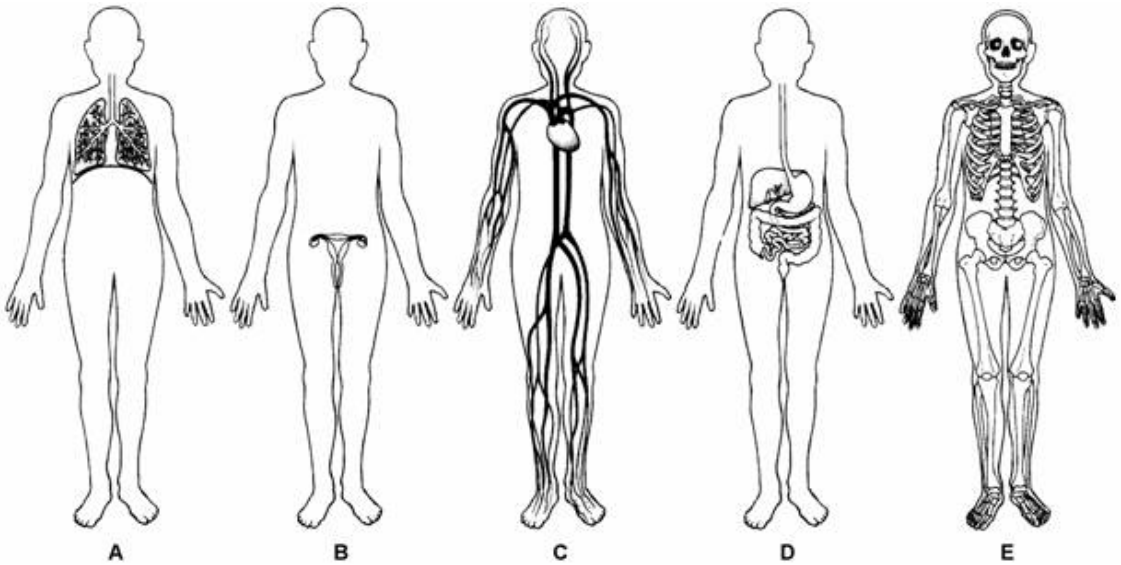
.....

.....

1 mark

Maximum 5 marks

Q2. Drawings A, B, C, D and E show the positions of five organ systems in the human body.



(a) The names of the five organ systems are given in the table. By each name, write the letter of the drawing which shows the organ system.

name of organ system	letter of the drawing of the organ system
circulatory system	
digestive system	
reproductive system	
respiratory system	
skeleton	

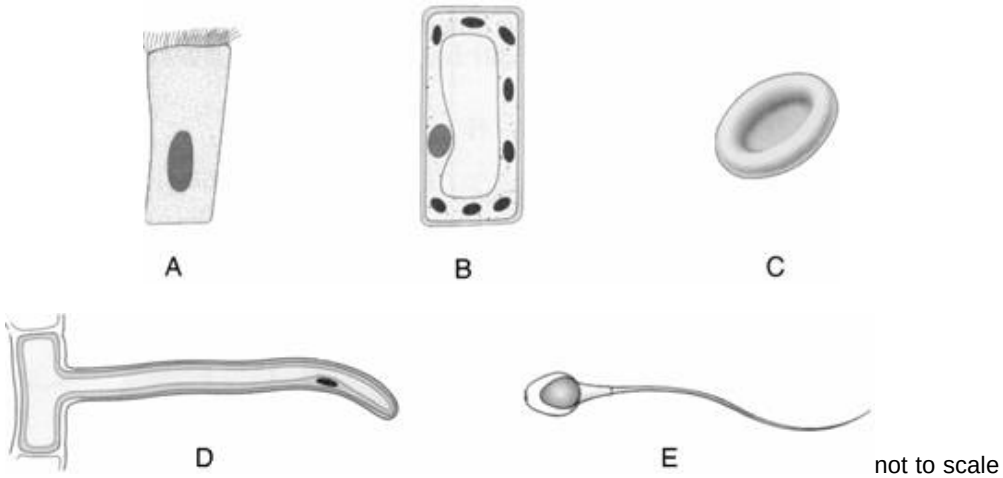
5 marks

(b) Which **one** of these organ systems is completely different in a man and a woman?

.....

1 mark
Maximum 6 marks

Q3. The drawings show some plant and animal cells. Each cell has a different function.



not to scale

(a) Give the name of cell C.

.....

1 mark

(b) The main functions of two of the cells are listed below.

Write the letter of the correct cell next to each function.

(i) photosynthesis .....……

(ii) improvement of mucus .....……

2 marks

(c) (i) Give the name of the organ where cell E is produced.

.....……

1 mark

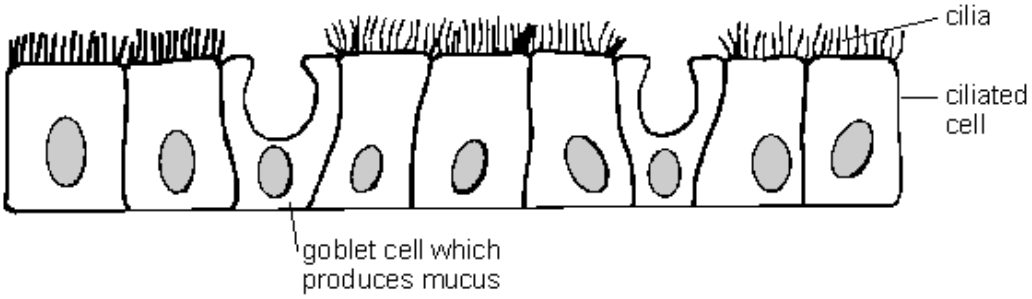
(ii) Give the name of the part of a plant where cell B is found.

.....……

1 mark

Maximum 5 marks

Q4. The diagram shows two types of cell in the lining of the windpipe.



(a) (i) These cells work together to keep the lungs free of bacteria and dust particles.
What word describes a group of similar cells which work together?

……

1 mark

(ii) Mucus is a sticky substance.
Describe how **mucus** and **cilia** keep the lungs free of bacteria and dust particles.

……

……

……

……

2 marks

(b) When a person breathes in cigarette smoke, the goblet cells produce extra mucus and the cilia are damaged.
What will be the consequences of this?

……

……

……

……

2 marks

(c) Give the names of **two** harmful substances in cigarette smoke.
In what way is each one harmful?

1. name of substance ……

   harmful effect ……..

   …….

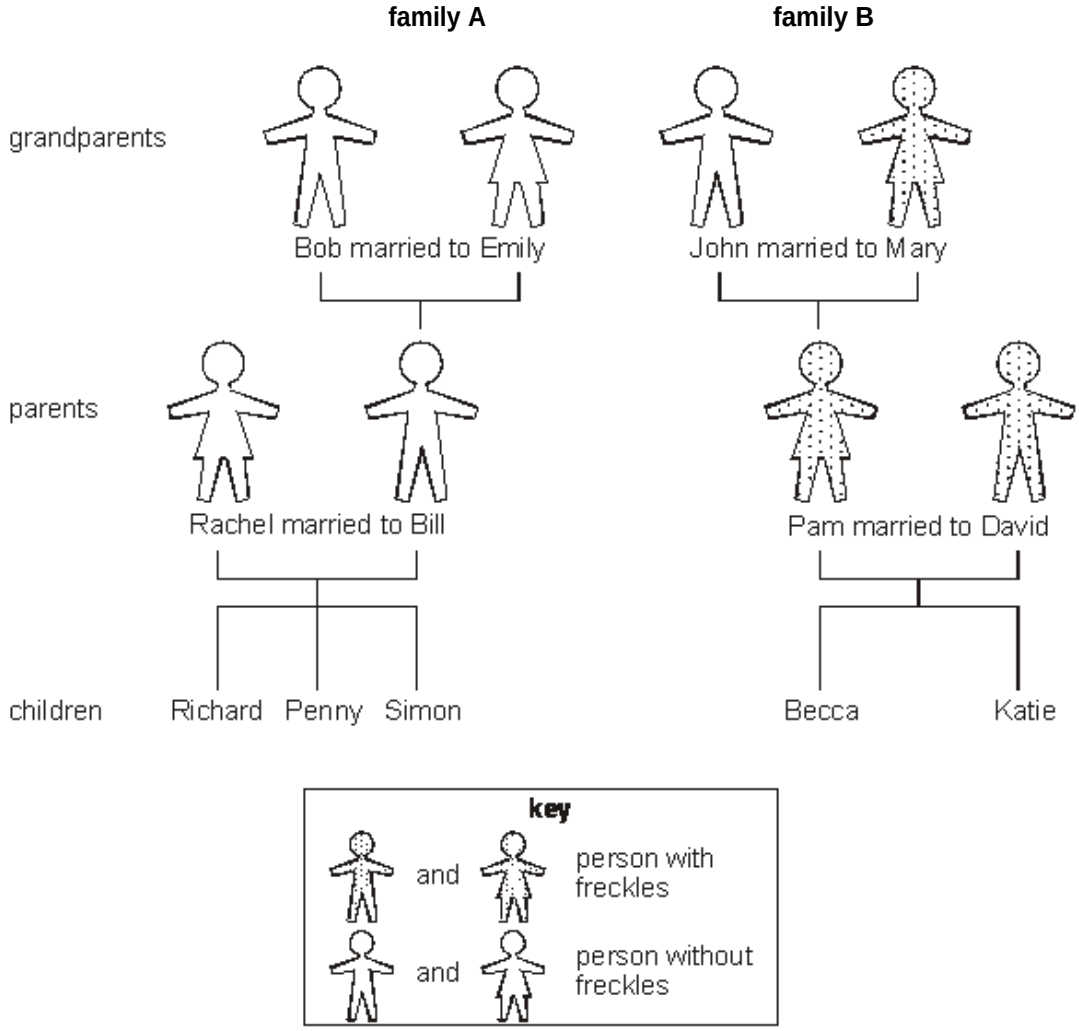
2. name of substance ……...……

   harmful effect ……

   …….

2 marks
Maximum 7 marks

Q5. The diagram shows two families. Some of the people in the diagram have freckles.



(a) (i) Which children are most likely to have freckles?
Tick the correct boxes.

Richard	Simon	Katie	Penny	Becca
☐	☐	☐	☐	☐

1 mark

(ii) How did you decide?

.....

.....

1 mark

(iii) Suggest why Bill does **not** have freckles.

.....

.....

1 mark

(b) (i) Which **two** cells pass on information from parents to their children?
Tick the **two** correct boxes.

bone cell	☐	cheek cell	☐
egg cell	☐	muscle cell	☐
red blood cell	☐	sperm cell	☐

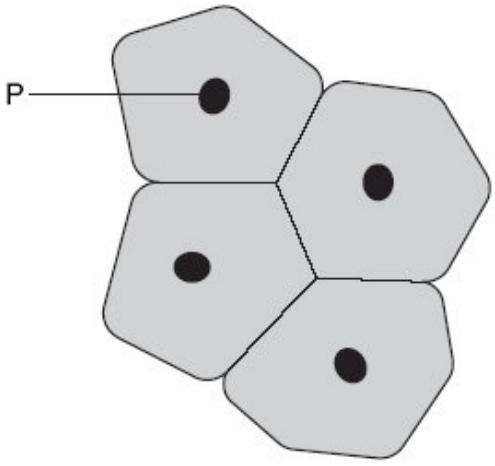
1 mark

(ii) Which organ system produces these two cells?
Tick the correct box.

circulatory system	☐
digestive system	☐
reproductive system	☐
respiratory system	☐

1 mark
maximum 5 marks

Q6. (a) The diagram shows a group of cells from the lining of the mouth.



(i) Give the name and function of part P.

name of part P

.....

1 mark

function of part P

.....

.....

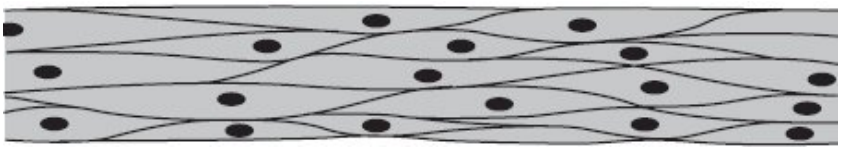
1 mark

(ii) Which word describes this group of cells?
Tick the correct box.

compound	organism	organ	tissue
☐	☐	☐	☐

1 mark

(b) The diagram below shows muscle cells from the wall of the human intestine.



(i) Muscle cells can contract.

Give **one** reason why muscles are needed in the intestine.

.....

.....

1 mark

(ii) Other cells in the intestine produce enzymes.

What effect do enzymes in the intestine have on nutrients such as protein?

.....

.....

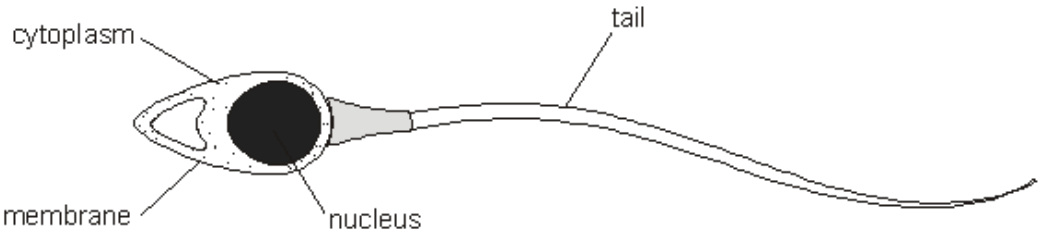
1 mark

(iii) Which of the following is required in the diet to keep food moving through the intestine?
Tick the correct box.

fat	☐	fibre	☐
protein	☐	starch	☐

1 mark
maximum 6 marks

Q7. (a) The diagram shows a sperm cell. Sperm cells are adapted for fertilisation.



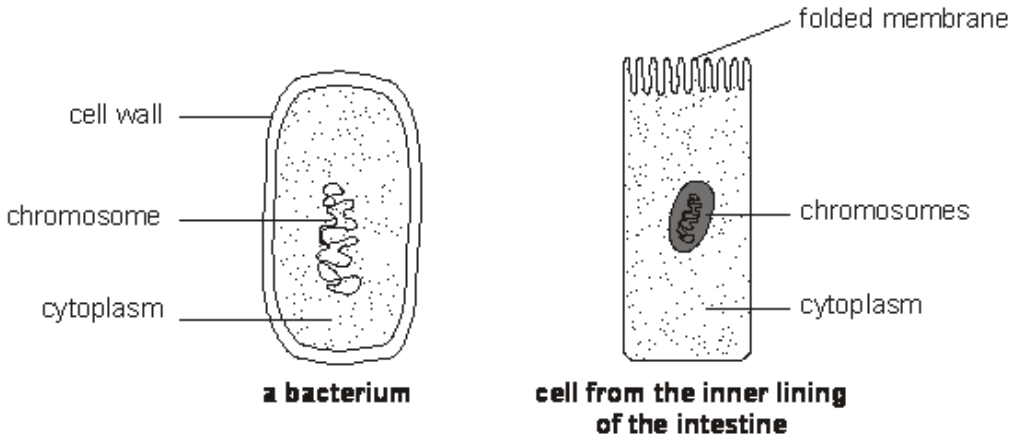
Sperm cells use their tails to swim towards an ovum (egg).
Give **one** other way the sperm cell is adapted for fertilisation.

.....

.....

1 mark

(b) The diagrams below show two other cells.



a bacterium

cell from the inner lining of the intestine

not to scale

(i) Look at the diagrams above.

What is the difference between the location of the genetic material in the bacterium and in the cell from the lining of the intestine?

.....

.....

.....

1 mark

(ii) What is the function of the genetic material in a cell?

.....

.....

1 mark

(c) Cells in the lining of the intestine are adapted to absorb digested food.

How does the folded membrane of these cells enable them to absorb the maximum amount of digested food?

.....

.....

1 mark

(d) A group of cells in the lining of the intestine is a tissue.

Why is a number of sperm cells **not** a tissue?

.....

.....

1 mark

maximum 5 marks

Q8. Sharon is riding her horse. She is wearing a riding hat.

(a) Give the name of **one organ** the riding hat protects.

.....

1 mark

(b) The horse is a mammal.
Give **one** fact about horses that shows they are mammals.

.....

1 mark

(c) When the horse is running, some of its organs do more work.

Draw a line from each organ to show what it does.
Draw only **two** lines.

organ	what the organ does
heart	It takes in oxygen faster.
	It moves the bones faster.
lung	It digests food faster.
	It pumps blood faster.

1 mark

(d) The drawing shows a horsefly.

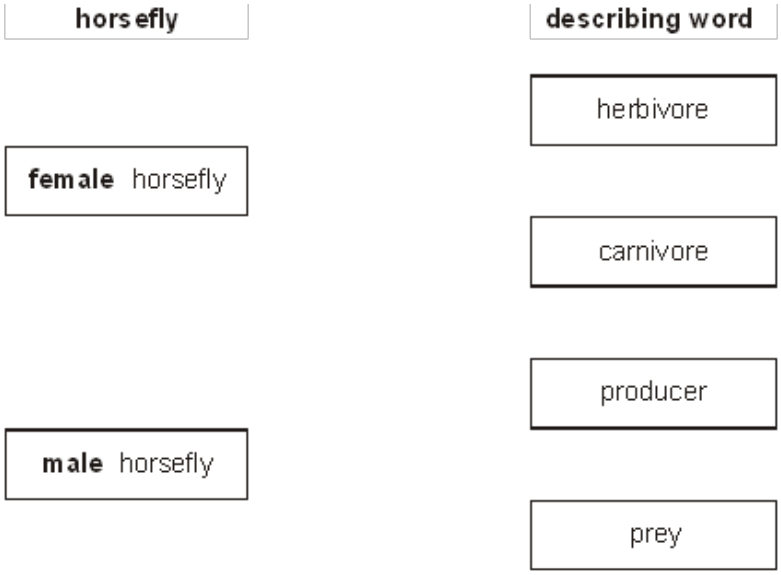
(i) The horsefly is an insect.
Which of the following features do insects have?
Tick the **three** correct boxes.

They have a backbone.	☐	They have a segmented body.	☐
They have six legs.	☐	They have hair.	☐
They have scales.	☐	They have two pairs of wings.	☐

2 marks

(ii) Female horseflies bite horses and feed on their blood.
Male horseflies feed on plants.

Draw a line from each horsefly below to the word that describes the way it feeds.
Draw only **two** lines.



1 mark
maximum 6 marks