Name_____

Aldenham School



Science Department

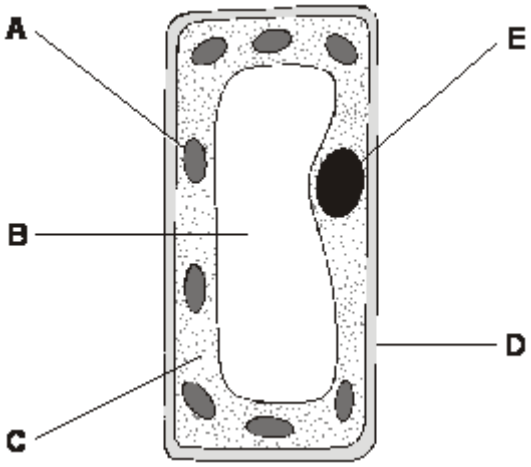
13+ Exam - Biology

SAMPLE PAPER

20 Minutes

28 Marks

Q1. The diagram shows a plant cell.



(a) Give the name of part A.

.....

Give the function of part A.

.....

.....

2 marks

(b) Give the name of part E.

.....

Give the function of part E.

.....

.....

2 marks

(c) Give the letters of **two** parts that are present in plant cells but **not** in animal cells.

..... and .....

1 mark

(d) How can you tell that the cell in the diagram is from a leaf and **not** from a root?

.....

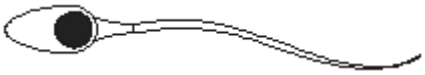
1 mark

maximum 6 marks

Q2. Choose words from the box below to answer **all** the questions.

cell division	**digestion**	**fertilisation**	**foetus**	**genes**	
intestine	**ovary**	**ovum (egg)**	**sperm**	**testis**	**uterus**

(a)



A

(i) What is the name of cell A?

.....

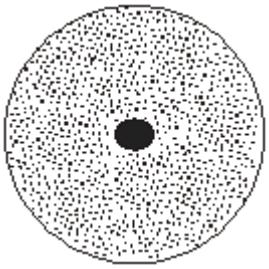
1 mark

(ii) Where is cell A produced?

.....

1 mark

(b)



B

(i) What is the name of cell B?

.....

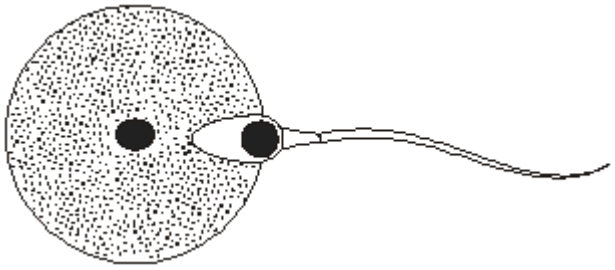
1 mark

(ii) Where is cell B produced?

.....

1 mark

(c)



C

not to scale

What process is shown in C? Choose your answer from the box above.

.....

1 mark

(d) The diagram shows a baby developing inside its mother.



(i) Which word means an unborn baby? Choose your answer from the box above.

.....

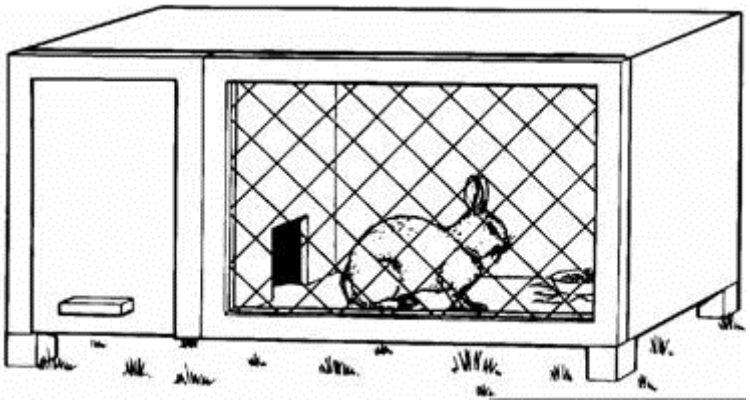
1 mark

(ii) Where does the unborn baby develop? Choose your answer from the box above.

.....

1 mark
maximumm 7 marks

Q3. Andrew put his rabbit's cage on the grass.



A week later, the grass under the cage had turned yellow.

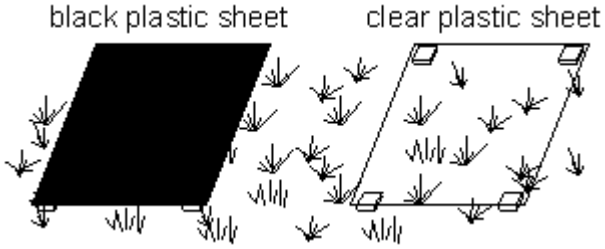
(a) Give **one** reason why the grass had turned yellow.

.....

.....

1 mark

(b) Andrew wanted to test why the grass had turned yellow. He put two sheets of plastic just above another patch of grass. One sheet was black and the other sheet was clear.



A week later, the grass under the black sheet was yellow. The grass under the clear sheet was green.

(i) Explain why he used the clear plastic sheet as well as the black sheet.

.....

.....

1 mark

(ii) Andrew left the black sheet there for several more weeks.
What happened to the grass under it?

.....

.....

1 mark

(c) Tick the boxes by **two** things which **both** rabbits **and** grass plants can do.

they eat ☐

they grow ☐

they move from place to place ☐

they reproduce ☐

they breathe in and out ☐

2 marks
Maximum 5 marks

Q4. (a) Tom watched birds feeding in his garden.
He spotted the birds shown below.



not to scale

Tom recorded what the birds in his garden ate.
His results are shown below.

bird	type of food			
	fruit	nuts	worms	seeds
blackbird	✓		✓	
blue tit		✓		✓
bullfinch				✓
dove				✓
sparrow		✓		✓
robin	✓		✓	✓

Use the information in the table to answer the following questions.

(i) Tom put some pieces of fruit in his garden.
Which **two** birds will eat this food?

…..... and .....

1 mark

(ii) How many types of bird eat nuts?

.....

1 mark

(iii) Which food from the table opposite will attract the **most types** of **bird**?

.....

1 mark

(iv) Which bird from the table eats the most types of **food**?

.....

1 mark

(b) What are birds covered with to keep them warm?

.....

1 mark

(c) Many birds reproduce in the spring.



Suggest why birds need extra food in the spring.

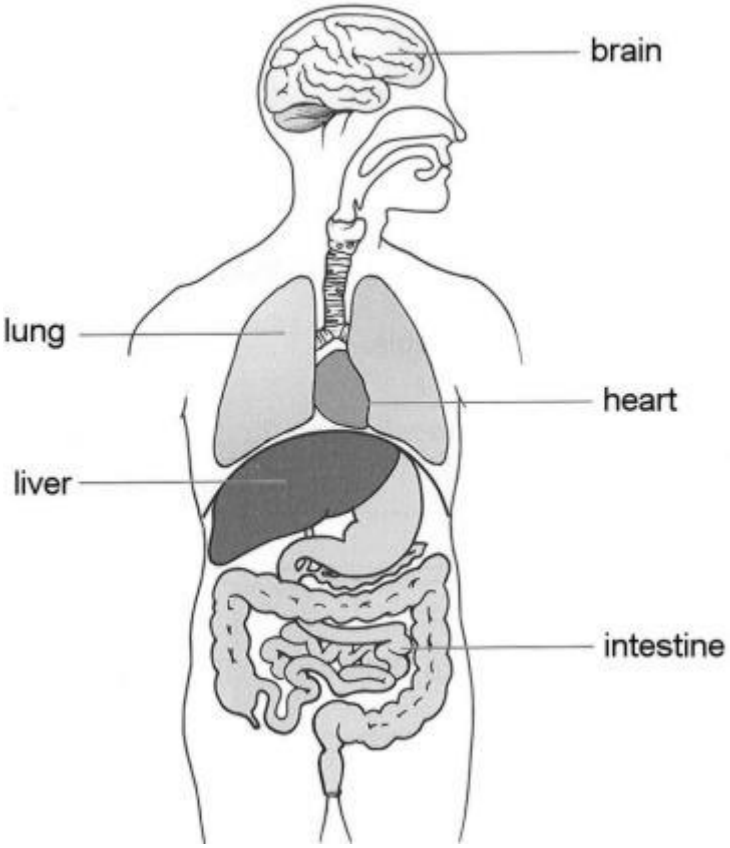
.....

.....

1 mark

maximum 6 marks

Q5. The diagram shows some of the organs of the human body.



(a) The heart pumps blood around the body.

(i) What useful gas does the blood take in from the air in the lungs?

.....

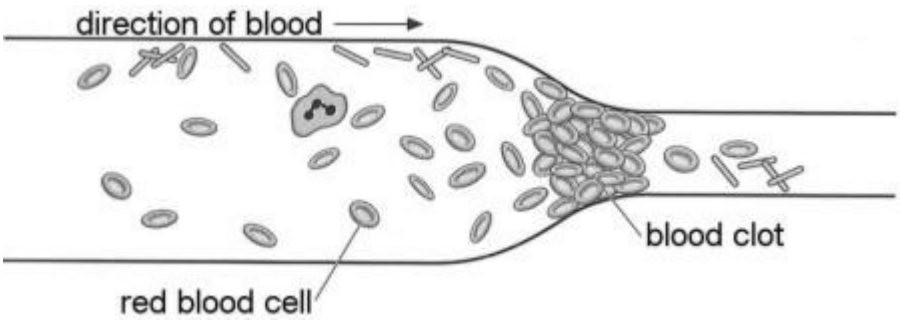
1 mark

(ii) What useful substance does the blood take in from the intestine?

.....

1 mark

(b) Blood vessels carry blood to organs of the body.
Sometimes a blood clot forms in a blood vessel as shown below.



a blood vessel *not to scale*

A blood clot may stop an organ working properly.
Give **one** reason for this.

.....

.....

1 mark

(c) Rahma cut his foot on a piece of glass. A scab formed over the cut.
Give **one** way a scab protects the body.

.....

.....

1 mark
maximum 4 marks