Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

BIOLOGY **0610/11**

Paper 1 Multiple Choice (Core) **October/November 2018**

45 minutes

Additional Materials: Multiple Choice Answer Sheet
Soft clean eraser
Soft pencil (type B or HB is recommended)

READ THESE INSTRUCTIONS FIRST

Write in soft pencil.
Do not use staples, paper clips, glue or correction fluid.
Write your name, Centre number and candidate number on the Answer Sheet in the spaces provided unless this has been done for you.
DO **NOT** WRITE IN ANY BARCODES.

There are **forty** questions on this paper. Answer **all** questions. For each question there are four possible answers **A**, **B**, **C** and **D**.
Choose the **one** you consider correct and record your choice in **soft pencil** on the separate Answer Sheet.

Read the instructions on the Answer Sheet very carefully.

Each correct answer will score one mark. A mark will not be deducted for a wrong answer.
Any rough working should be done in this booklet.
Electronic calculators may be used.

This syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of **18** printed pages and **2** blank pages.

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CAMBRIDGE International Examinations

1 Which characteristic of living organisms is represented by gas exchange in the alveoli?

View solution

A excretion

B growth

C nutrition

D reproduction

2 The binomial name for humans is *Homo sapiens*.

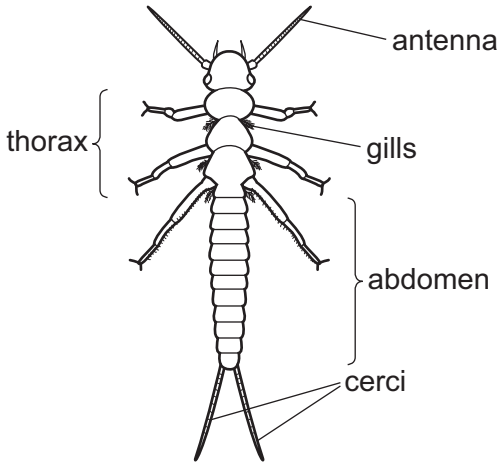
View solution

Which row is correct?

	Homo	*sapiens*
A	genus	kingdom
B	genus	species
C	species	genus
D	species	kingdom

3 The diagram shows a stonefly larva.

View solution



Use the key to identify the stonefly larva.

1 has two cerci at the end of the abdomen ..... go to 2

has three cerci at the end of the abdomen ..... go to 3

2 abdomen longer than thorax ..... **A**

thorax longer than abdomen ..... **B**

3 gills visible on the thorax ..... **C**

gills not visible ..... **D**

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4 Which part of a plant cell controls the movement of substances into and out of the cell?

View solution

A cell membrane

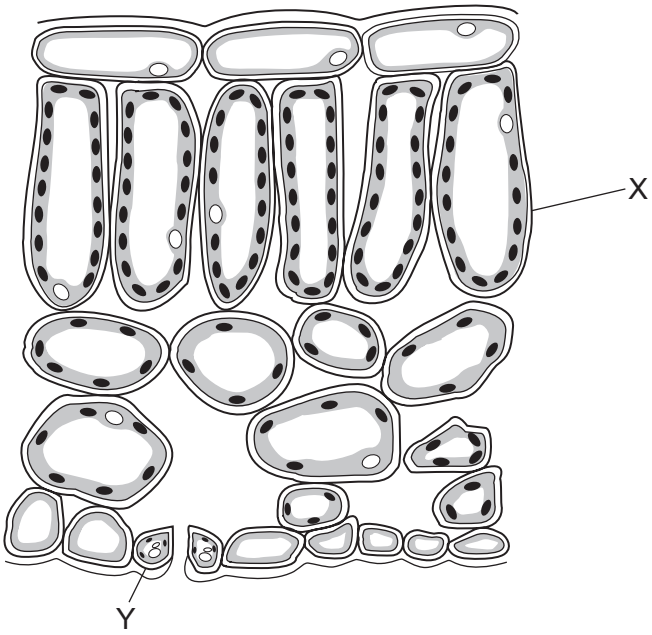
B cell wall

C cytoplasm

D vacuole

5 The diagram shows part of a leaf in cross-section.

View solution



Structures X and Y are both part of the same

A cell.

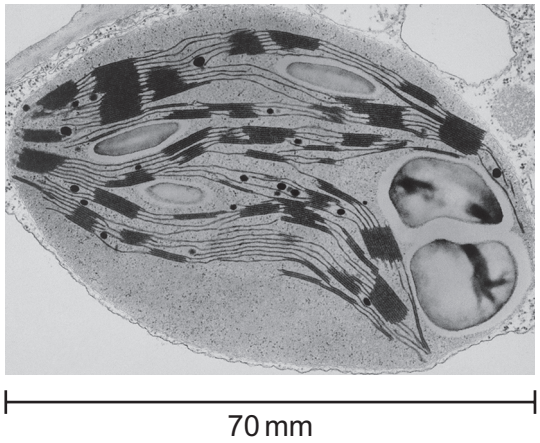
B organ.

C tissue.

D vessel.

6 The photograph shows a chloroplast magnified ×7000.

View solution



What is the actual size of the chloroplast?

A 0.0001 mm **B** 0.001 mm **C** 0.01 mm **D** 100 mm

7 How do carbon dioxide and oxygen move into and out of a mesophyll cell?

View solution

A active transport

B diffusion

C respiration

D transpiration

8 What are the features of active transport?

View solution

	occurs through a cell membrane	particles move from a higher to a lower concentration	uses energy from respiration
A	✓	✓	✓
B	✓	✓	✗
C	✓	✗	✓
D	✗	✓	✓

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9 The data show the concentrations of sugar and starch in an onion.

View solution

total sugar including reducing sugar / g per 100g	starch / g per 100g
3.7	0.0

The onion is tested with Benedict's solution and iodine solution.

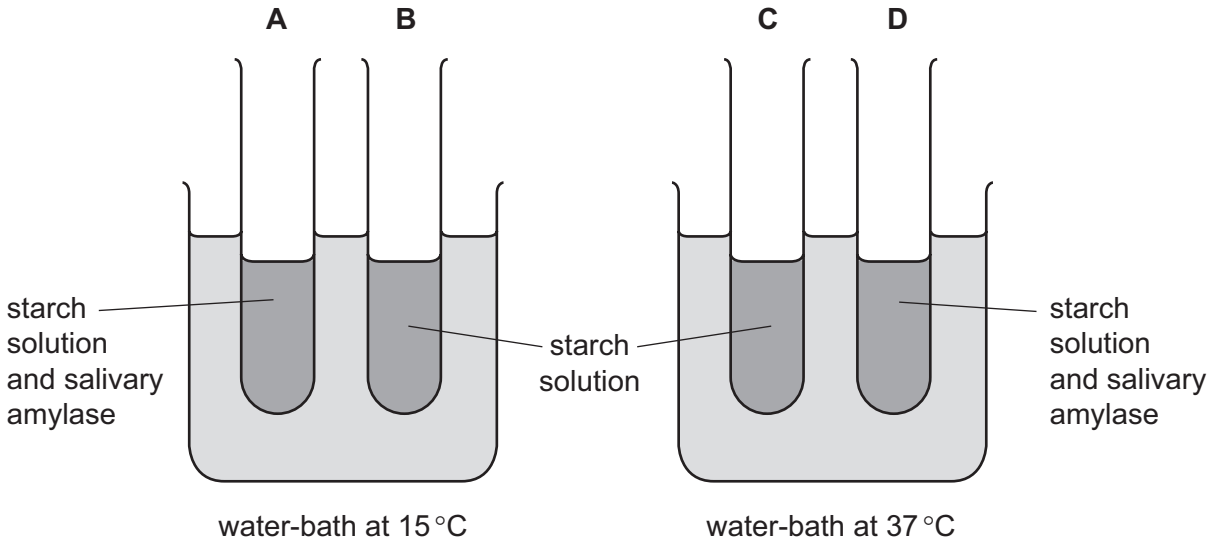
Which set of results is correct?

	Benedict's solution	iodine solution
A	blue	blue-black
B	blue	brown
C	brick red	blue-black
D	brick red	brown

10 The apparatus shown is used for an experiment on starch digestion.

View solution

Which test-tube contains the most sugar after 20 minutes?

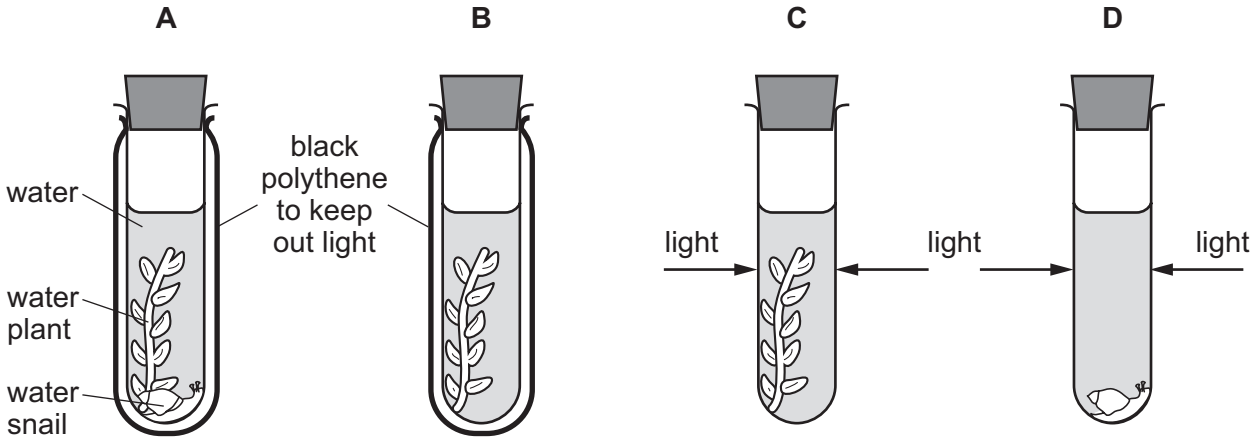


11 An experiment was carried out using the apparatus shown.

The carbon dioxide content of the water in each test-tube was measured at the start and again three hours later.

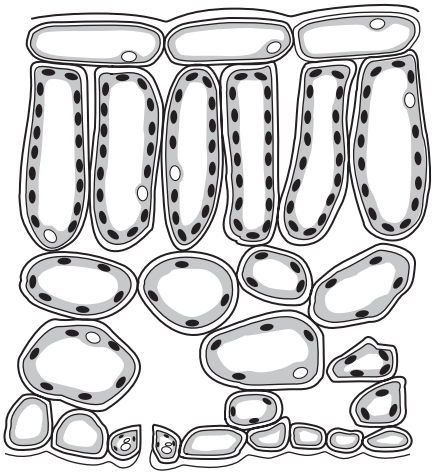
View solution

In which test-tube would there be a decrease in carbon dioxide content?



12 The diagram shows a cross-section of a leaf.

View solution



Which tissue is immediately below the upper epidermis?

A cuticle

B guard cells

C palisade mesophyll

D spongy mesophyll

13 What is the result of a diet lacking iron?

View solution

A bleeding gums

B poor wound healing

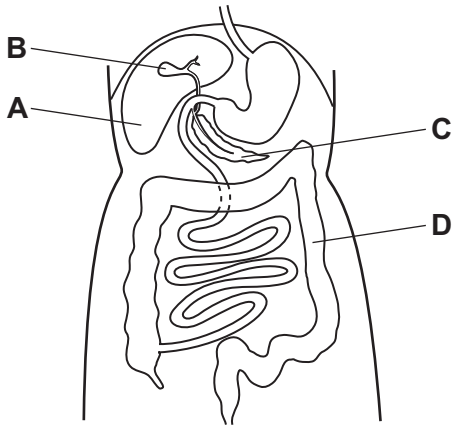
C reduced number of red blood cells

D weak bones and teeth

14 The diagram shows part of the alimentary canal.

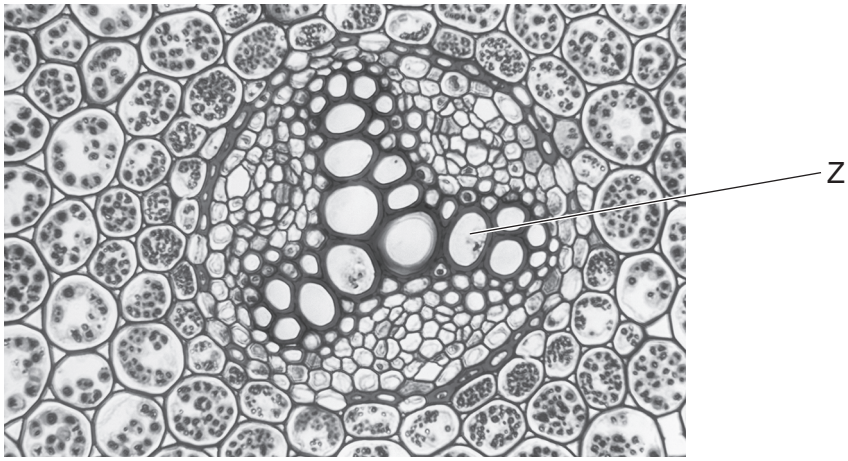
View solution

Which structure produces lipase?



15 The photomicrograph shows a cross-section through a buttercup root.

View solution



What is the function of the tissue labelled Z?

A site of photosynthesis

B site of respiration

C transport of sugars

D transport of water

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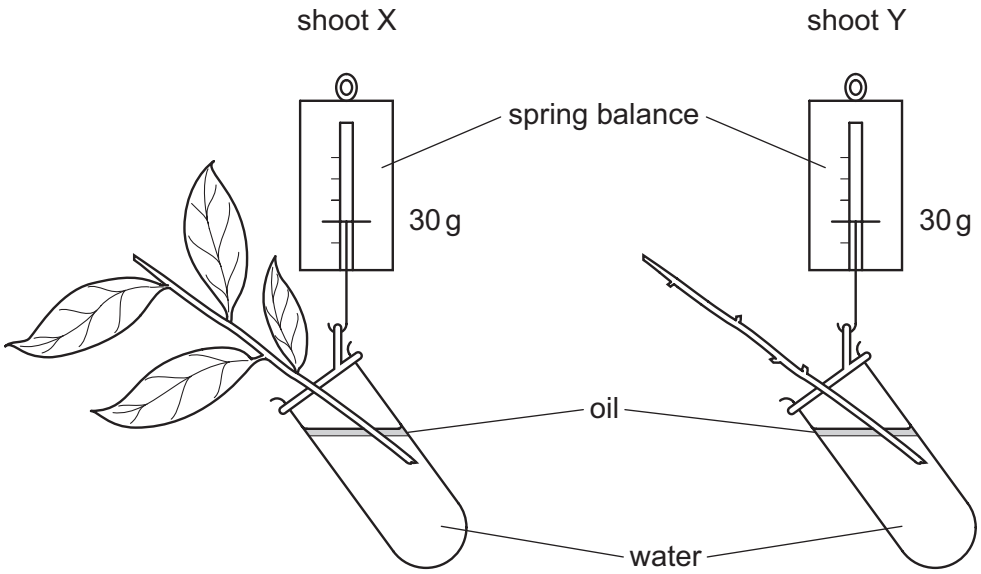
16 The diagram shows two shoots at the start of an experiment on transpiration.

View solution

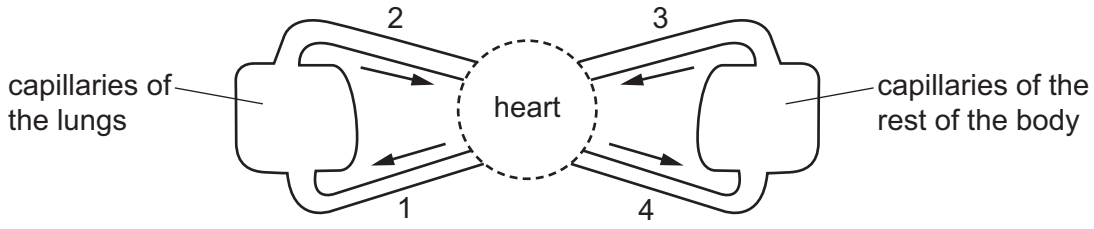


What are the likely readings on the spring balances after three days?

	shoot X / g	shoot Y / g
A	25	25
B	25	30
C	30	25
D	30	30

17 The diagram shows a circulatory system.

View solution



Which vessels carry oxygenated blood?

A 1 and 2 **B** 1 and 4 **C** 2 and 3 **D** 2 and 4

18 Some features that help to defend the body against pathogens are listed.

View solution

1 mucus

2 skin

3 stomach acid

4 phagocytosis

Which features can prevent pathogens entering body tissues?

A 1, 2, 3 and 4

B 1, 2 and 3 only

C 2 and 3 only

D 4 only

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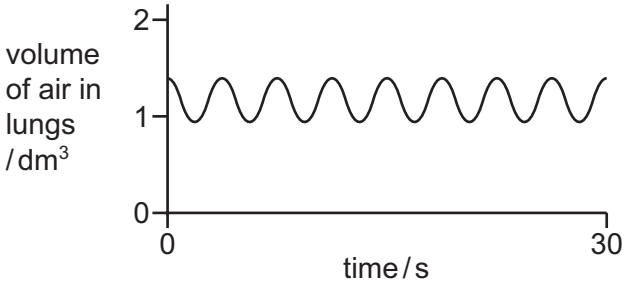
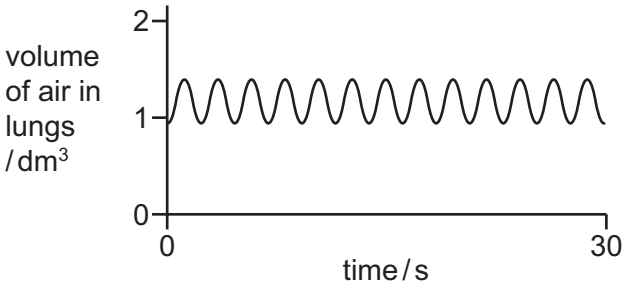
19 The graph shows changes in the volume of air in the lungs of a person at rest, over a period of 30 seconds.

View solution

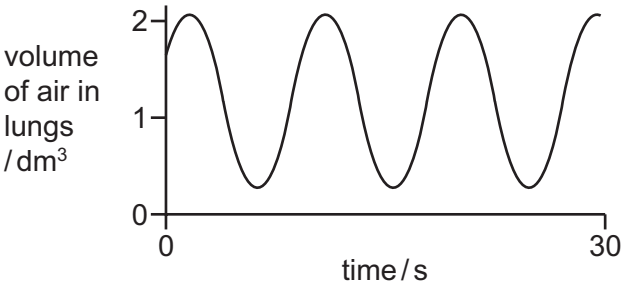


Which graph shows changes in the volume of air in the lungs of the same person immediately after they have done five minutes of vigorous exercise?

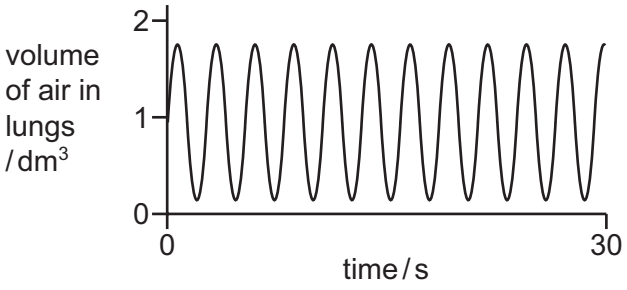
A



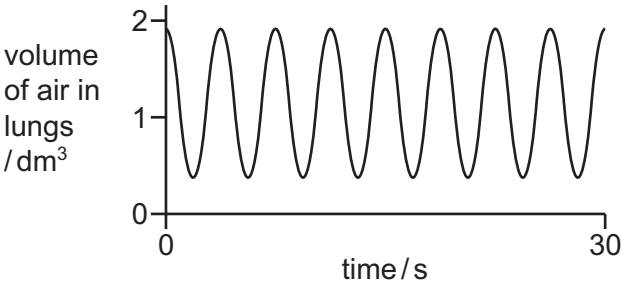
B



C



D



20 What is produced by anaerobic respiration in mammals?

View solution

A alcohol + carbon dioxide

B alcohol + oxygen

C lactic acid + carbon dioxide

D lactic acid

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21 Which row describes the functions of the bladder, kidneys and liver?

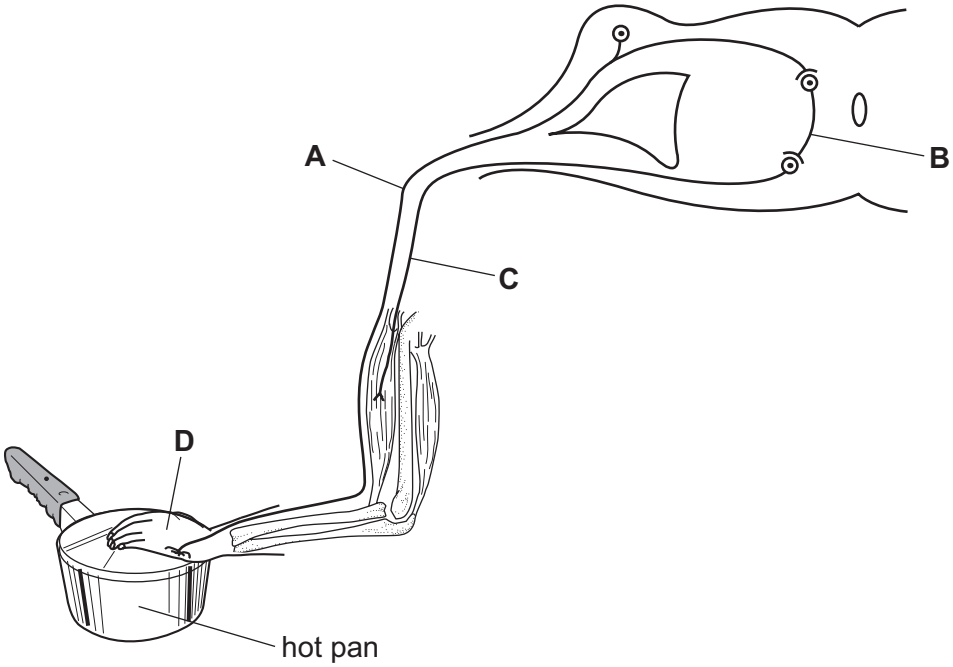
View solution

	production of urea	excretion of urea	storage of urine
A	liver	bladder	kidneys
B	bladder	kidneys	liver
C	liver	kidneys	bladder
D	kidneys	liver	bladder

22 The diagram shows a reflex arc.

View solution

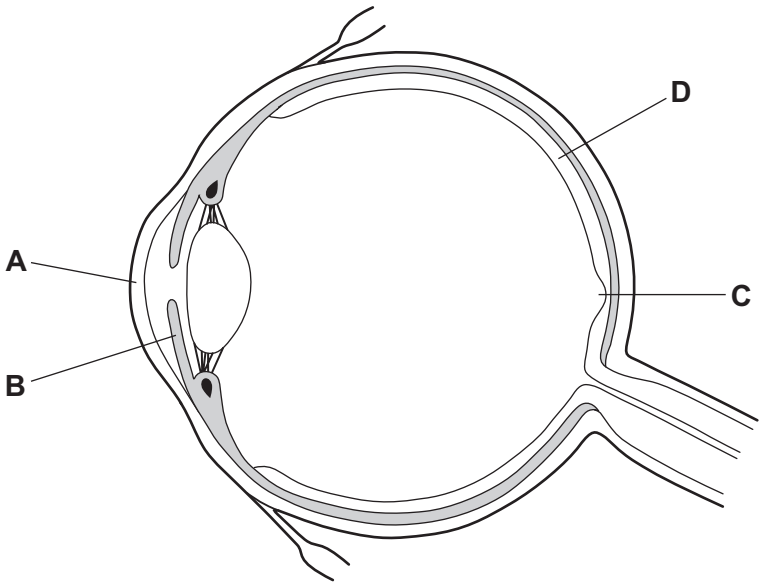
Which label points to the sensory neurone?



23 The diagram shows the structure of the eye.

View solution

Which structure refracts light?



24 Which disease can be caused by tobacco smoking?

View solution

A cholera

B COPD

C HIV

D scurvy

25 What is formed when the nucleus of a sperm fuses with the nucleus of an egg?

View solution

A gamete

B ovule

C stamen

D zygote

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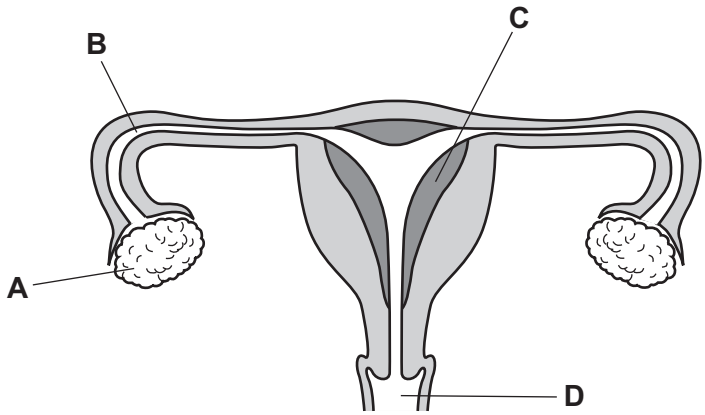
26 The diagram shows the female reproductive system.

View solution

Where does implantation normally occur?



27 Which precautions could help to prevent the spread of AIDS?

View solution

1 avoiding the mixing of blood

2 using a femidom

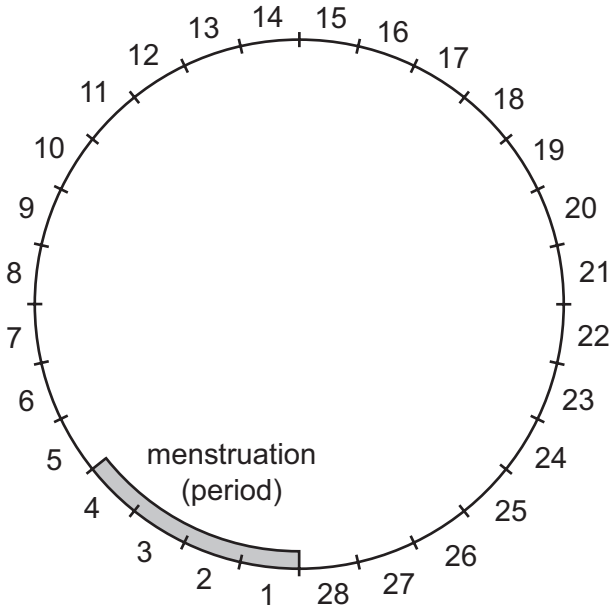
3 using the contraceptive pill

4 using a condom

A 1 and 3 **B** 1, 2 and 4 **C** 2, 3 and 4 **D** 2 and 4 only

28 The diagram shows a timeline of a woman's menstrual cycle, which lasts for 28 days.

View solution



On which days of the menstrual cycle is a woman most likely to become pregnant?

A days 1–4

B days 7–10

C days 13–16

D days 20–23

29 The diagram shows what happens during fertilisation.

View solution

egg + sperm → fertilised egg → male embryo

Which sex chromosomes are present in the egg, sperm and fertilised egg shown?

	egg	sperm	fertilised egg
A	X	X	XX
B	X	Y	XY
C	Y	X	XY
D	Y	Y	YY

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30 Many of the varieties of apple in the world evolved from a single wild species, *Malus sieversii*.

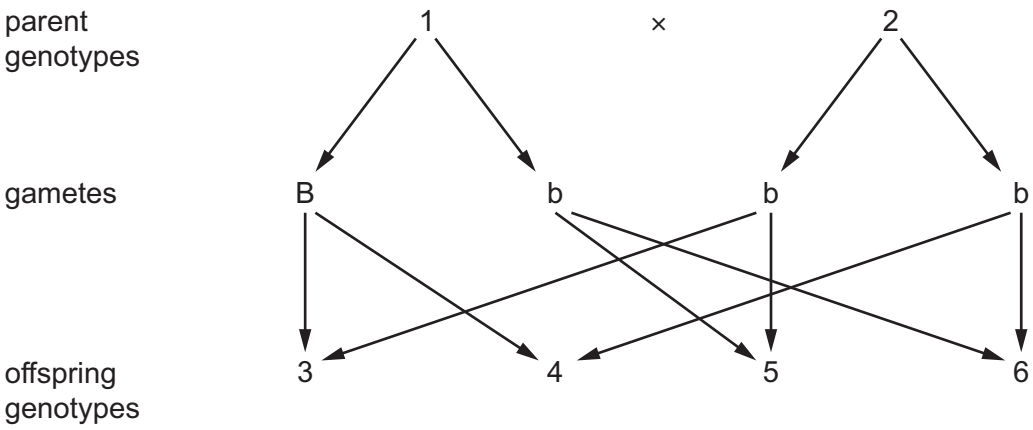
Which processes were involved in creating thousands of genetically different varieties of apple?

View solution

	fertilisation	meiosis	mitosis
A	✓	✓	✓
B	✓	✓	✗
C	✓	✗	✓
D	✗	✓	✓

31 The genetic diagram shows a monohybrid cross. B is the dominant allele and b is the recessive allele.

View solution

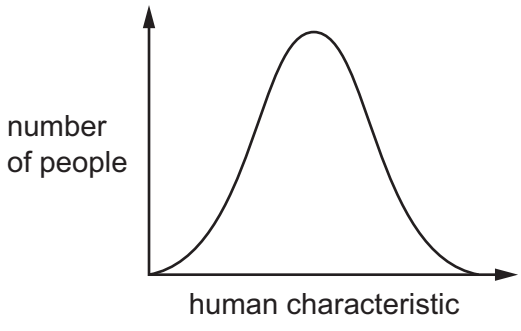


Which of the parents and offspring are heterozygous?

A 1, 3 and 4 **B** 1, 5 and 6 **C** 2, 3 and 4 **D** 2, 5 and 6

32 The curve shows the distribution of a human characteristic.

View solution



Which characteristic is shown by the curve?

A blood groups

B height

C sex

D tongue rolling

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33 A farmer grows different varieties of dates, which are a type of fruit.

View solution

The table shows some features of the dates he grows.

variety	colour	texture	yield	size
Barhee	amber	soft	high	small to medium
Dayri	dark reddish brown	semi dry	variable	medium to large
Hayany	purplish black	soft	medium	large
Maktoom	amber	soft	medium	medium to large
Thoory	straw coloured	dry	medium	medium to large

The farmer would like to produce a new variety of date using selective breeding.

He wants a medium sized date that is straw coloured and soft, with a high yield.

Which two varieties could the farmer breed together to get the variety he wants?

A Barhee and Dayri

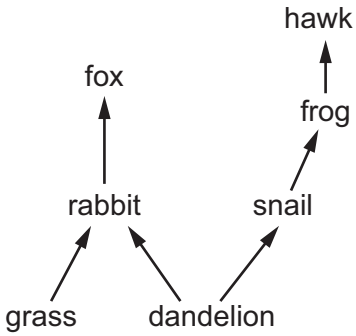
B Barhee and Thoory

C Dayri and Maktoom

D Maktoom and Thoory

34 The diagram shows a woodland food web.

View solution



Which statement is correct?

A Dandelions and grass are both primary consumers.

B The fox and the hawk are both secondary consumers.

C The frog is a tertiary consumer.

D The rabbit and the snail are both primary consumers.

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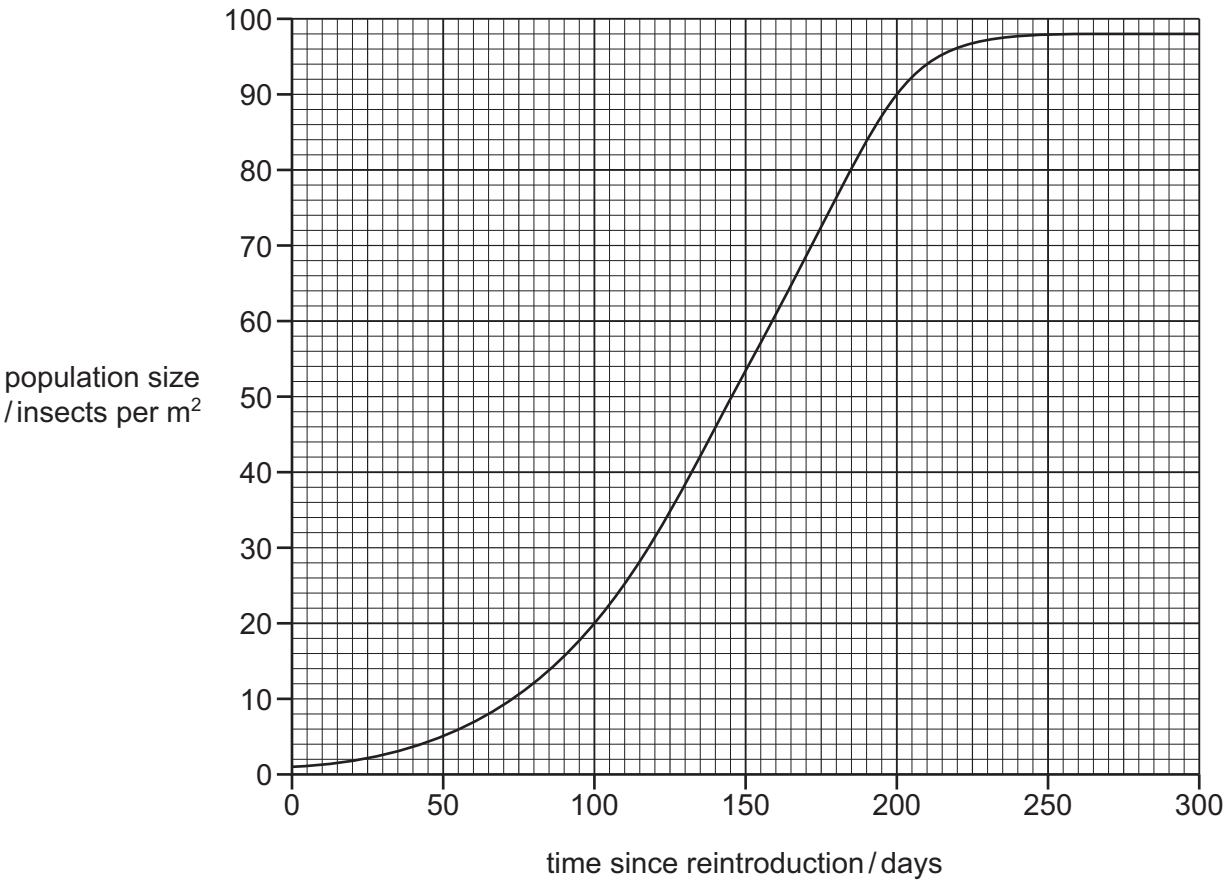
35 Which process releases carbon dioxide into the air and which process removes carbon dioxide from the air?

View solution

	releases carbon dioxide into the air	removes carbon dioxide from the air
A	decay	photosynthesis
B	decay	respiration
C	photosynthesis	combustion
D	photosynthesis	decay

36 The graph shows a population growth curve for a species of insect which has been reintroduced to an island from where it had previously become extinct.

View solution



How long after reintroduction does the insect population size start to become limited by resources such as food?

A 50 days **B** 100 days **C** 150 days **D** 200 days

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37 Biotechnology is used to produce ethanol for biofuels.

View solution

Which type of organism can be used to produce the ethanol?

A fish

B myriapods

C viruses

D yeast

38 What is an example of genetic engineering?

View solution

A using enzymes to make washing powders

B using pectinase to make fruit juice

C producing plants that have been given genes for resistance to insect pests

D using yeast to make bread

39 What is **least** likely to result from deforestation?

View solution

A increase in flooding

B increase in species

C loss of habitats

D loss of soil

40 What could prevent a species from becoming endangered?

View solution

A captive breeding programme

B climate change

C introduction of other species

D pollution

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