

# Cambridge IGCSE™

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## BIOLOGY

0610/12

Paper 1 Multiple Choice (Core)

February/March 2026

45 minutes

You must answer on the multiple choice answer sheet.

You will need: Multiple choice answer sheet  
Soft clean eraser  
Soft pencil (type B or HB is recommended)

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## INSTRUCTIONS

- 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 multiple choice answer sheet.
- Follow the instructions on the multiple choice answer sheet.
- Write in soft pencil.
- Write your name, centre number and candidate number on the multiple choice answer sheet in the spaces provided unless this has been done for you.
- Do **not** use correction fluid or tape.
- Do **not** write on any bar codes.
- You may use a calculator.

## INFORMATION

- The total mark for this paper is 40.
- Each correct answer will score one mark.
- Any rough working should be done on this question paper.

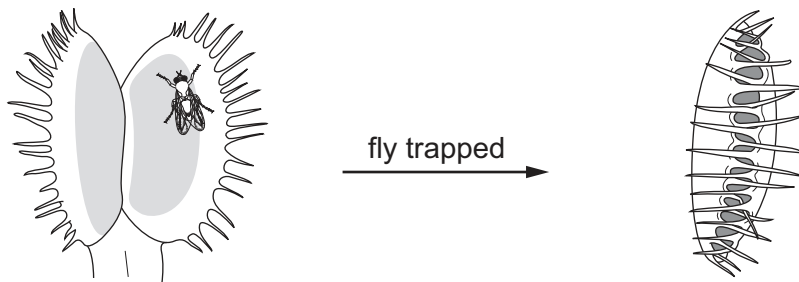
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This document has **16** pages. Any blank pages are indicated.

- 1 The diagram shows how a plant, called a Venus fly-trap, reacts to a fly landing on it.

a fly lands on a leaf

the fly is digested by juices  
produced by the leaf



Which characteristics of living things are shown by the plant in the diagram?

- A excretion and growth
  - B growth and sensitivity
  - C nutrition and reproduction
  - D nutrition and sensitivity
- 2 How many parts make up the scientific name of an organism?
- A one
  - B two
  - C three
  - D four
- 3 A student finds a vertebrate that has the features listed.

- 1 claws
- 2 feathers
- 3 four limbs
- 4 lays eggs

Which of these features mean that this vertebrate must be a bird?

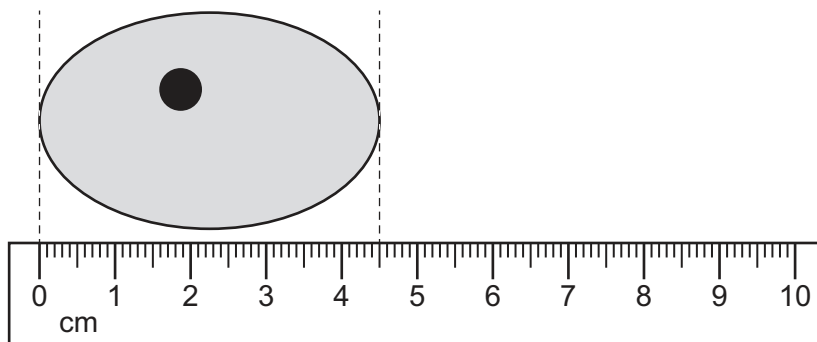
- A 1 and 3
- B 1 and 4
- C 2 and 3
- D 2 only

- 4 The photomicrograph shows a plant cell.

Which part is the nucleus?



- 5 The diagram shows a cell at  $\times 1500$  magnification.



What is the actual size of the cell?

- A** 0.003 mm      **B** 0.03 mm      **C** 33 mm      **D** 333 mm

- 6 Identical pieces of potato were placed in two test-tubes.

Distilled water was added to test-tube R and concentrated salt solution was added to test-tube S.

Which row shows the expected change in mass of the potato?

|          | test-tube R    | test-tube S    |
|----------|----------------|----------------|
| <b>A</b> | mass decreased | mass decreased |
| <b>B</b> | mass decreased | mass increased |
| <b>C</b> | mass increased | mass decreased |
| <b>D</b> | mass increased | mass increased |

- 7 Cyanide is a chemical that prevents the release of energy in flowering plants.

Which process will slow down if cyanide is added?

- A** active transport
- B** diffusion
- C** osmosis
- D** transpiration

- 8 Which simple molecules are the basic units of protein?

- A** amino acids
- B** fatty acids
- C** sugars
- D** vitamins

- 9 What are descriptions of lipase?

- 1 catalyst
- 2 enzyme
- 3 fat

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

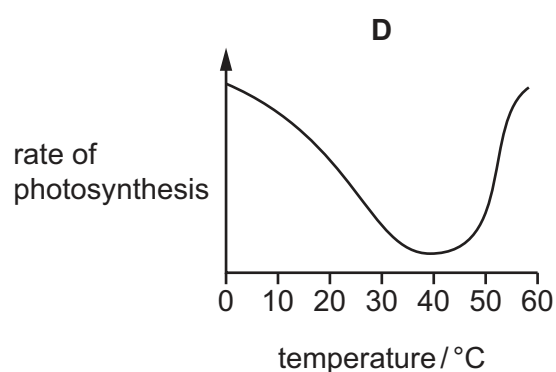
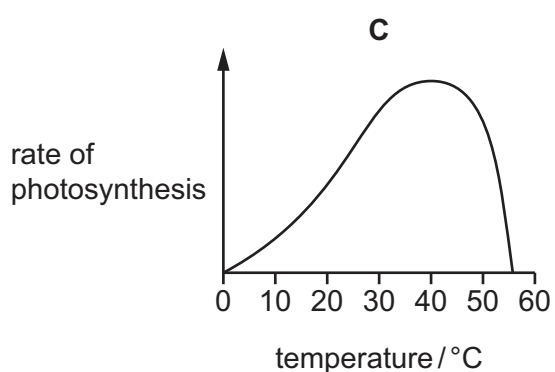
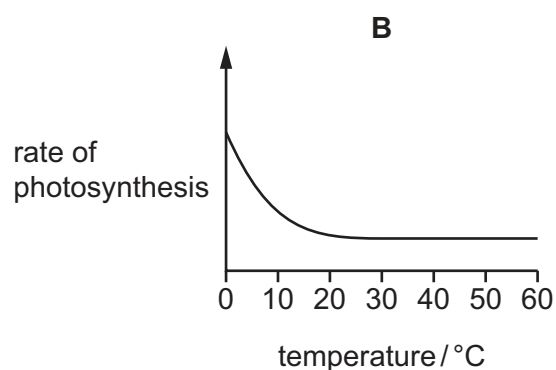
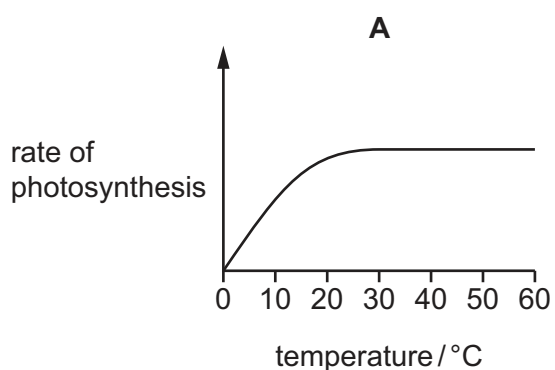
10 Which statement about enzymes is correct?

- A Enzymes have an active site with a shape that is complementary to the product.
- B Enzymes have an active site with a shape that is complementary to the substrate.
- C Products have an active site with a shape that is complementary to the enzyme.
- D Substrates have an active site with a shape that is complementary to the enzyme.

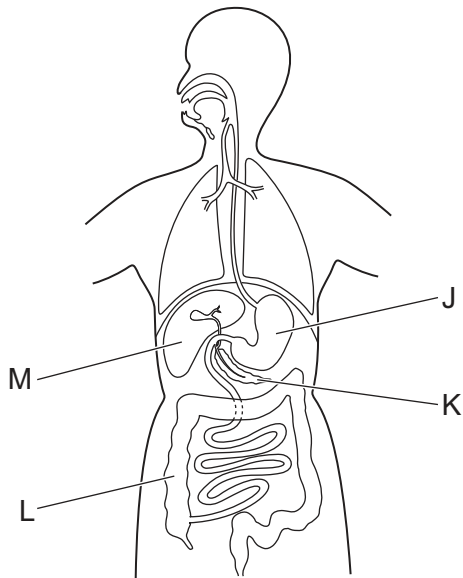
11 Which two substances are the products of photosynthesis?

- A carbon dioxide and glucose
- B carbon dioxide and water
- C oxygen and carbon dioxide
- D oxygen and glucose

12 Which graph shows the effect of temperature on the rate of photosynthesis?



**13** The diagram shows the human digestive system.

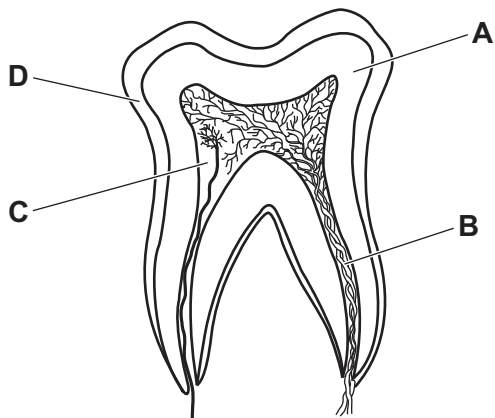


Which statement is correct for this diagram of the human digestive system?

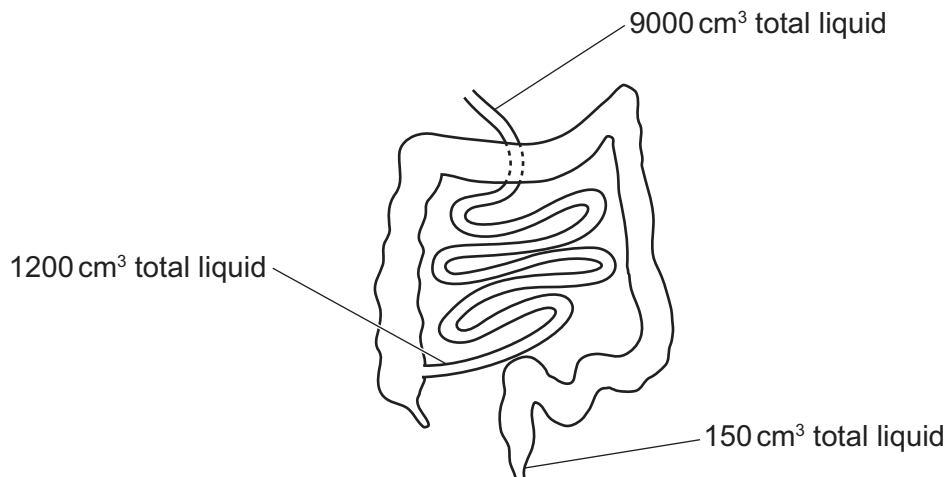
- A** J is the pancreas that produces lipase.
- B** K is the pancreas that produces amylase.
- C** L is the large intestine that produces protease.
- D** M is the stomach that produces protease.

**14** The diagram shows a cross-section of a tooth.

Which part is the dentine?

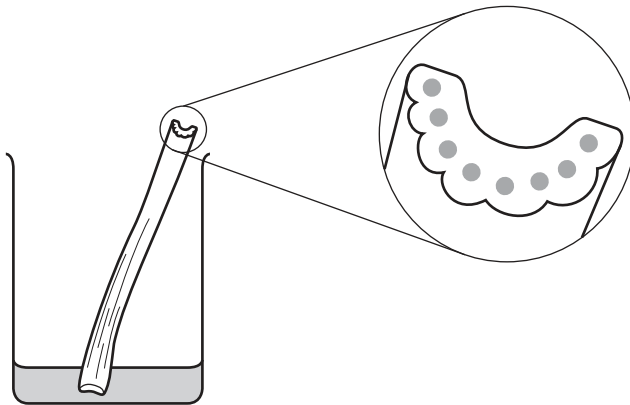


- 15 The diagram shows the total volume of liquid in different areas of the intestines during one day.



Which statement explains the changes in these volumes?

- A Most water is absorbed in the colon.
  - B Most water is absorbed in the small intestine.
  - C Most water is lost by excretion.
  - D Most water is lost in the faeces.
- 16 A celery stalk was placed in a beaker which contained a red stain. After 24 hours, the red stain appeared at the top of the celery stalk.

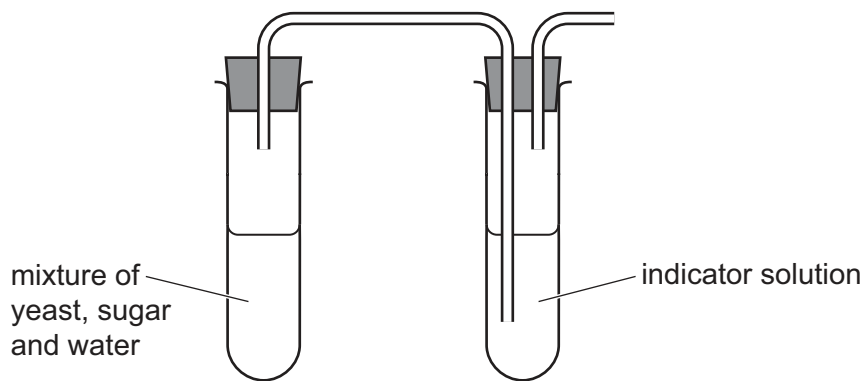


Which structures stained red?

- A cortex cells
- B mesophyll cells
- C phloem
- D xylem

- 17** A complete heartbeat occurs when all four muscular walls of the heart complete their contraction.
- In a baby, it takes 0.4 seconds for one complete heartbeat.
- How many times does the baby's heart beat in one minute?
- A** 0.4                      **B** 24                      **C** 150                      **D** 240
- 18** Which blood vessel carries blood to the right atrium of the heart?
- A** aorta  
**B** coronary artery  
**C** pulmonary vein  
**D** vena cava
- 19** A patient has a blood test and the platelet count is found to be lower than usual.
- Which effect will this have?
- A** Blood clotting at a cut will take longer.  
**B** Fewer antibodies will be produced if microbes enter the bloodstream.  
**C** Nutrient transport around the body will be restricted.  
**D** Less oxygen will be carried to body cells.
- 20** Which disease is a transmissible disease?
- A** coronary heart disease  
**B** HIV infection  
**C** rickets  
**D** scurvy
- 21** By which process does carbon dioxide move from the blood into the alveoli?
- A** active transport  
**B** diffusion  
**C** inspiration  
**D** respiration

22 The apparatus shown is set up and left for one hour.



A gas is released by the mixture. It caused the indicator solution to go cloudy.

What is the indicator solution?

- A alcohol
- B Benedict's solution
- C biuret solution
- D limewater

23 A small mammal was kept in a sealed container for a short time before being released.

Which row shows the changes to the composition of the air inside the sealed container?

|   | percentage of carbon dioxide | percentage of oxygen |
|---|------------------------------|----------------------|
| A | decreases                    | decreases            |
| B | decreases                    | increases            |
| C | increases                    | decreases            |
| D | increases                    | increases            |

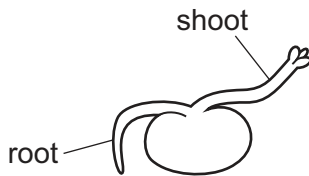
24 The diagram shows the stages in a pupil reflex.

light → receptor cells → P → relay neurone → Q → R (effector) → pupil diameter changes

Which structures are represented by P, Q and R?

|   | P               | Q               | R      |
|---|-----------------|-----------------|--------|
| A | motor neurone   | sensory neurone | cornea |
| B | motor neurone   | sensory neurone | iris   |
| C | sensory neurone | motor neurone   | cornea |
| D | sensory neurone | motor neurone   | iris   |

25 The diagram shows a young plant growing in the dark.



Which tropisms are shown by the root and shoot of this plant?

|   | root         | shoot                         |
|---|--------------|-------------------------------|
| A | gravitropism | gravitropism                  |
| B | gravitropism | gravitropism and phototropism |
| C | phototropism | phototropism                  |
| D | phototropism | gravitropism and phototropism |

26 In which situation would insulin secretion usually increase?

- A after eating a meal
- B hearing a loud bang immediately behind you
- C listening to music
- D reading a book

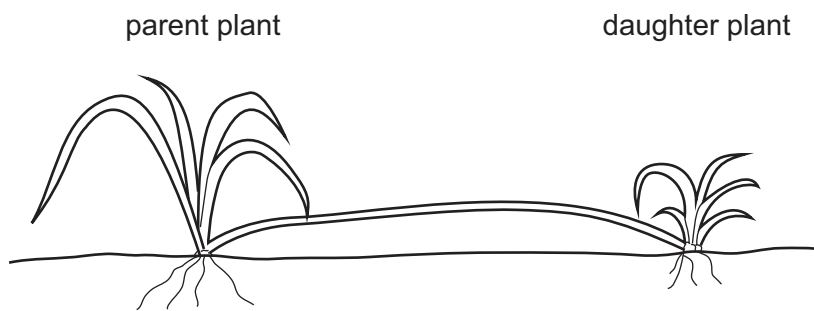
27 Which statement about adrenaline is correct?

- A It decreases the heart rate.
- B It decreases the diameter of the pupil.
- C It increases the breathing rate.
- D It is made in the pancreas.

28 What is a definition that applies to all types of drug?

- A a substance taken into the body that acts as a depressant
- B a substance taken into the body that affects chemical reactions in the body
- C a substance taken into the body to cure illness
- D a substance taken into the body to kill bacteria

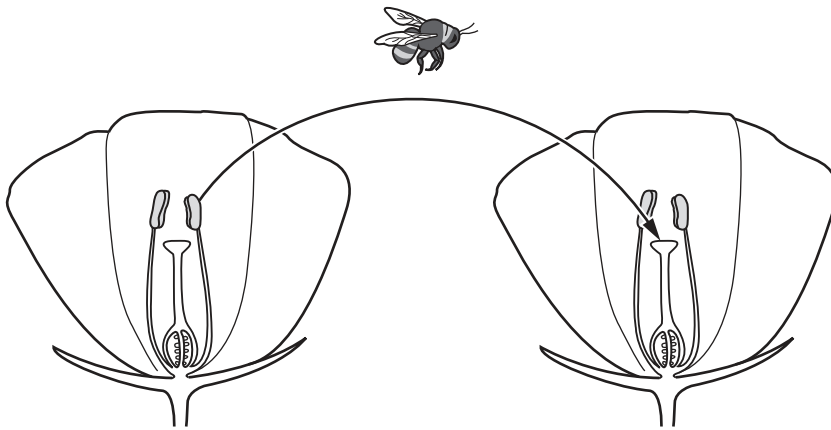
29 The diagram shows a spider plant with a daughter spider plant growing from it.



Which statement is correct?

- A Fertilisation was involved in this type of reproduction.
- B Only one parent is needed in this type of reproduction.
- C The parent and daughter plant are genetically different.
- D This is an example of sexual reproduction.

30 The diagram shows a process in flowering plants.



What is the name of this process?

- A fertilisation
  - B germination
  - C pollination
  - D predation
- 31 What is the order of structures that a sperm usually travels through to fertilise an egg cell?
- A cervix → oviduct → ovary
  - B cervix → uterus → oviduct
  - C uterus → cervix → ovary
  - D uterus → cervix → oviduct
- 32 A species of flower can have white or red petals.

White flowers must have **two** alleles for white petals.

Red flowers only need **one** allele for red petals.

Which statement describes the genotype of a white flower?

- A heterozygous dominant for petal colour
- B heterozygous recessive for petal colour
- C homozygous dominant for petal colour
- D homozygous recessive for petal colour

**33** Which statement applies to the shape of pea seeds?

- A** The seed shape is caused by the environment only.
- B** The seed shape is caused by genes only.
- C** The seed shape phenotype has intermediates.
- D** The seed shape shows continuous variation.

**34** What is the principal source of energy for living organisms?

- A** herbivores
- B** plants
- C** photosynthesis
- D** the Sun

**35** The diagram shows a food chain.

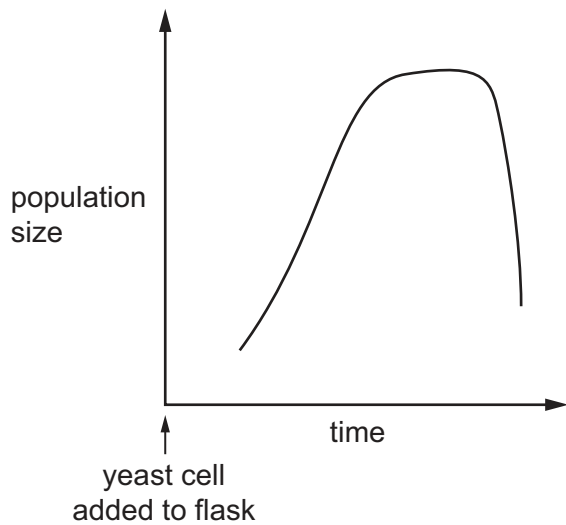
grass → wildebeest → lion

What do the arrows represent?

- A** digestion
- B** energy flow
- C** heat loss
- D** respiration

- 36** A yeast cell was introduced into a flask containing nutrients. The flask was kept at optimum conditions.

The graph shows the yeast population size over a period of time.



Which phase of the growth curve is missing from the graph?

- A** death phase
  - B** exponential (log) phase
  - C** lag phase
  - D** stationary phase
- 37** What is one example of how humans cause methane pollution?
- A** cutting down a tree to use the wood as a building material
  - B** placing waste material in landfill sites
  - C** driving electric cars
  - D** using selective breeding to improve crops
- 38** What are ways of conserving endangered species?

|          | education | seed banks |
|----------|-----------|------------|
| <b>A</b> | yes       | yes        |
| <b>B</b> | no        | yes        |
| <b>C</b> | yes       | no         |
| <b>D</b> | no        | no         |

- 39** Which statement correctly explains why bacteria are used in biotechnology?
- A** Bacteria reproduce slowly.
  - B** Bacteria need complex molecules.
  - C** Bacteria can make complex molecules.
  - D** Bacteria are all pathogens.
- 40** What is an example of genetic modification?
- A** artificially transferring pollen grains from an anther to a stigma
  - B** changes in organisms due to natural selection
  - C** choosing crop plants with high yields to breed together
  - D** inserting genes into crop plants to make them resistant to insect pests

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