

Cambridge IGCSE™

BIOLOGY

Paper 1 Multiple Choice (Core)

0610/13

May/June 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)

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.

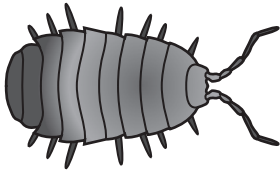
INFORMATION

- 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.

This document has **16** pages.



- 1 The diagram shows a species of arthropod.



Which group does this arthropod belong to?

- A arachnid
 - B crustacean
 - C insect
 - D myriapod
- 2 How many pairs of jointed legs does an insect have?
- A two pairs
 - B three pairs
 - C four pairs
 - D more than six pairs
- 3 Which type of cells are specialised to move mucus?
- A ciliated cells
 - B palisade mesophyll cells
 - C root hair cells
 - D white blood cells

4 Which structures are present in bacterial cells?

key

✓ = present in bacterial cells

x = **not** present in bacterial cells

	cell membrane	cell wall	chloroplast
A	✓	✓	x
B	✓	x	x
C	x	✓	✓
D	x	x	✓

5 An image of a spider is 275 mm long.

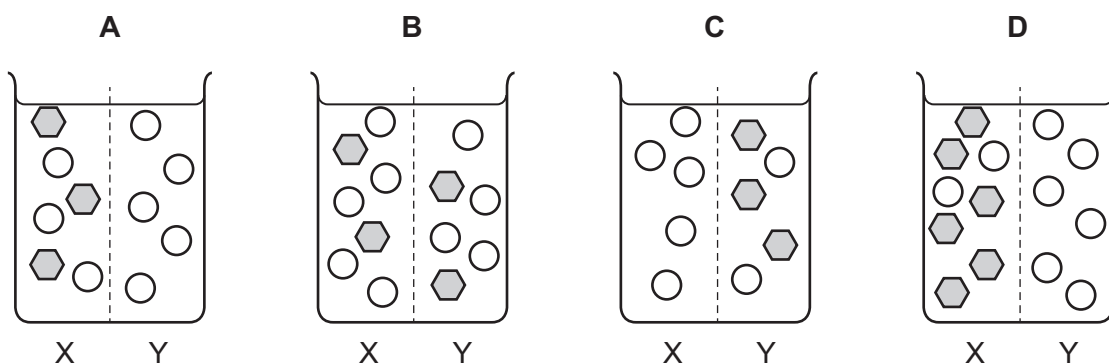
The magnification of the image is $\times 25$.

What is the actual size of the spider?

A 0.09 mm **B** 11.0 mm **C** 300 mm **D** 6875 mm

6 The diagrams show beakers with different concentrations of glucose solution separated by a permeable membrane. The membrane allows both glucose molecules and water molecules to move through.

In which diagram will glucose molecules diffuse from X to Y the fastest?



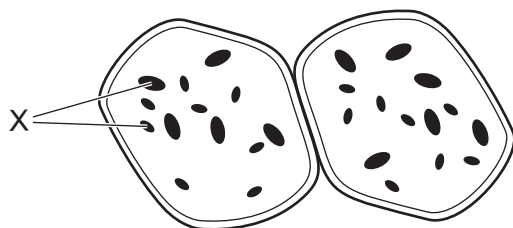
key

⬡ glucose molecules

○ water molecules

- 7 The diagram shows cells from a storage organ of a plant.

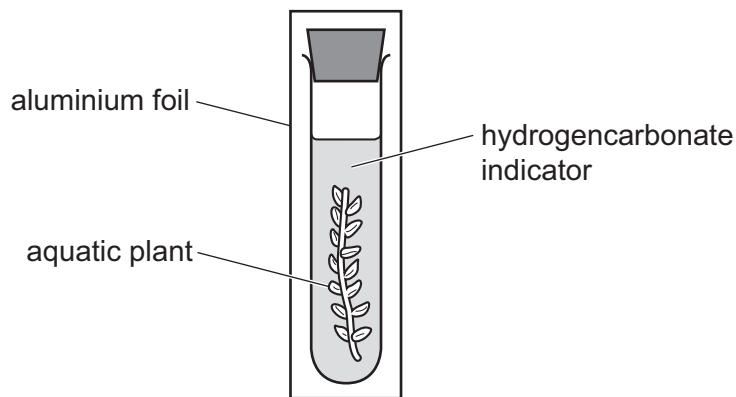
The structures, X, are stained blue-black by iodine solution.



What do the structures, X, contain?

- A chlorophyll
 - B fat
 - C starch
 - D sugar
- 8 Which statements describe a catalyst?
- 1 a substance that decreases the rate of a chemical reaction
 - 2 a substance that increases the rate of a chemical reaction
 - 3 a substance that is changed by the chemical reaction
 - 4 a substance that is **not** changed by the chemical reaction
- A 1 and 3 B 1 and 4 C 2 and 3 D 2 and 4

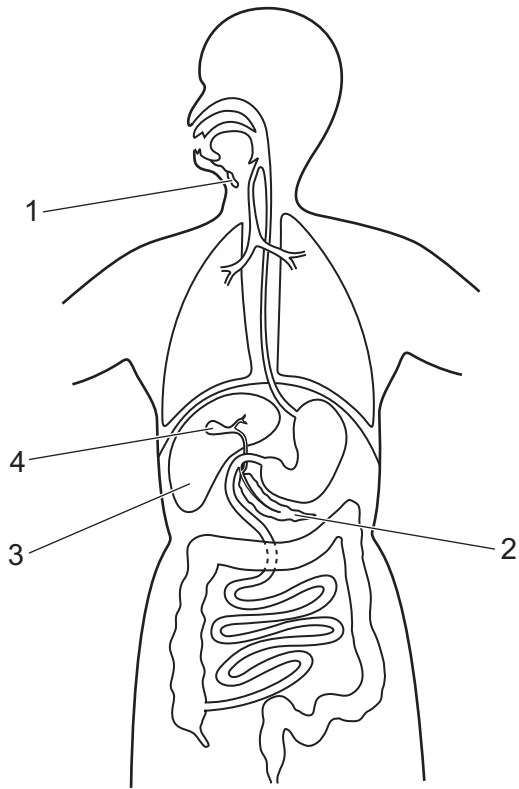
- 9 The diagram shows apparatus used to investigate gas exchange in an aquatic plant.



Which colour would the hydrogencarbonate indicator be after several hours?

- A blue
 - B purple
 - C red
 - D yellow
- 10 Which carbohydrate is used to build plant cell walls?
- A cellulose
 - B glycogen
 - C starch
 - D sucrose
- 11 Which structure in a leaf is adapted for photosynthesis by being near the upper surface and containing a large number of chloroplasts?
- A epidermis cell
 - B guard cell
 - C palisade mesophyll cell
 - D xylem vessel

12 The diagram shows the human digestive system.



Which row identifies the organs labelled 1–4?

	1	2	3	4
A	gall bladder	liver	pancreas	salivary glands
B	gall bladder	liver	salivary glands	pancreas
C	salivary glands	pancreas	gall bladder	liver
D	salivary glands	pancreas	liver	gall bladder

13 Which enzymes can digest oily fish?

key

✓ = yes

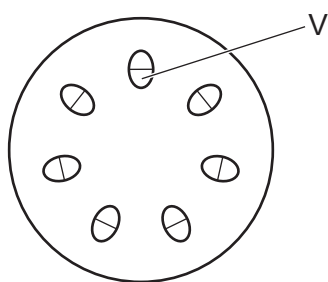
✗ = no

	amylase	lipase	protease
A	✓	✓	✗
B	✓	✗	✓
C	✗	✓	✓
D	✗	✗	✓

14 Which part of the alimentary canal is where most water is absorbed into the blood?

- A** oesophagus
- B** colon
- C** stomach
- D** small intestine

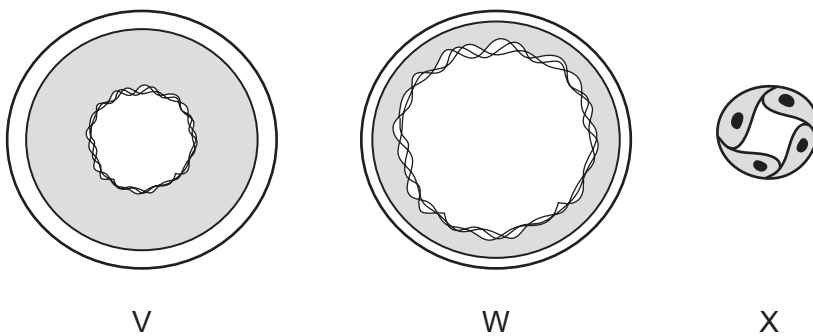
15 The diagram shows a cross-section of a plant stem.



What is the function of the tissue labelled V?

- A** transporting dissolved nutrients and mineral ions
- B** transporting dissolved nutrients only
- C** transporting water and mineral ions
- D** transporting water only

- 16** Which conditions will increase the rate of transpiration in a well-watered plant the most?
- A** high temperature and high wind speed
B high temperature and low wind speed
C low temperature and high wind speed
D low temperature and low wind speed
- 17** Which structure in the human heart separates the left and right ventricles?
- A** atria
B coronary artery
C one-way valve
D septum
- 18** The diagram shows cross-sections through three types of blood vessel, **not** drawn to the same scale.



Which section is from a vein and which section is from a capillary?

	vein	capillary
A	V	W
B	W	V
C	W	X
D	X	W

- 19** Which row shows how the concentrations of carbon dioxide and oxygen change in the blood as it passes through the lungs?

	carbon dioxide	oxygen
A	increase	decrease
B	increase	increase
C	decrease	decrease
D	decrease	increase

- 20** What are ways in which energy from respiration is used in living organisms?

key

✓ = energy is used for this

✗ = energy is **not** used for this

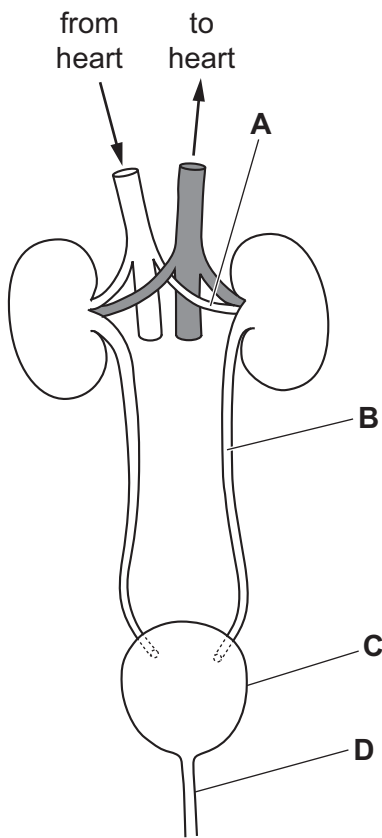
	active transport	diffusion	osmosis	protein synthesis
A	✓	✓	✓	✗
B	✓	✗	✗	✓
C	✓	✗	✓	✓
D	✗	✓	✗	✓

- 21** Which cells produce carbon dioxide during anaerobic respiration?

	muscle cells	yeast cells
A	no	no
B	no	yes
C	yes	no
D	yes	yes

22 The diagram shows structures associated with the human urinary system.

Which structure is the urethra?



23 Which statements about the mammalian nervous system are correct?

- 1 A synapse is a junction between two neurones.
- 2 Relay neurones pass electrical impulses to receptors.
- 3 The central nervous system (CNS) consists of the brain only.
- 4 The peripheral nervous system (PNS) consists of nerves outside the brain and spinal cord.

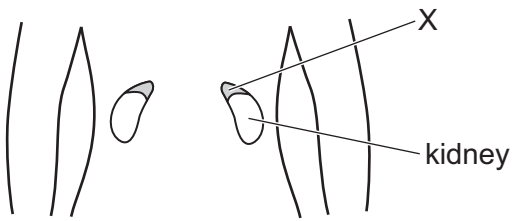
A 1 and 2

B 1 and 4

C 2 and 4

D 3 and 4

- 24** The diagram shows the position of the kidneys in the body.



Which hormone is produced by the gland labelled X?

- A** adrenaline
 - B** insulin
 - C** oestrogen
 - D** testosterone
- 25** A seed is planted under the soil and the shoot grows upwards.
- What is the name of this response when the shoot is growing under the soil?
- A** gravitropism
 - B** phototropism
 - C** photosynthesis
 - D** transpiration
- 26** What is defined as a substance that is taken into the body and modifies or affects chemical reactions in the body?
- A** antibody
 - B** drug
 - C** hormone
 - D** pathogen
- 27** What is fertilisation?
- A** a sperm entering an egg cell
 - B** a sperm nucleus fusing with an egg cell nucleus
 - C** the division of a zygote
 - D** the movement of a sperm towards an egg cell

28 Which structure produces pollen grains?

- A** anther
- B** filament
- C** stigma
- D** style

29 Methods of disease transmission are listed.

- 1 blood transferred from an infected person
- 2 holding hands with an infected person
- 3 sharing a drinking cup with an infected person
- 4 unprotected sexual intercourse with an infected person

By which methods of disease transmission can the human immunodeficiency virus (HIV) be transmitted between people?

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

30 What is defined as a length of DNA that codes for a protein?

- A** amino acid
- B** chromosome
- C** gene
- D** nucleus

31 A female fruit fly with short wings mates with a male fruit fly with long wings. All the offspring are long-winged.

Two of these offspring mate with each other.

Which percentage of their offspring will have long wings?

- A** 25% **B** 50% **C** 75% **D** 100%

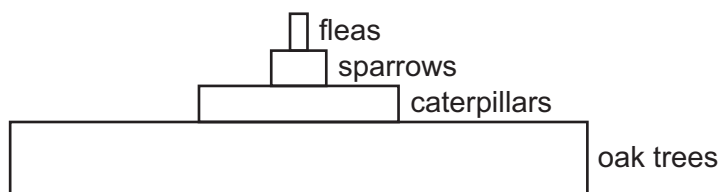
32 Four characteristics are listed.

- ABO blood group in humans
- body mass in humans
- seed shape in peas
- seed colour in peas

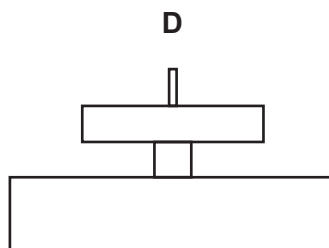
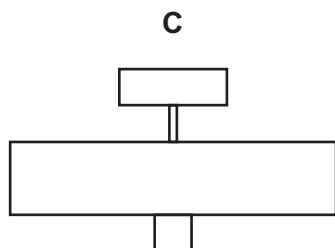
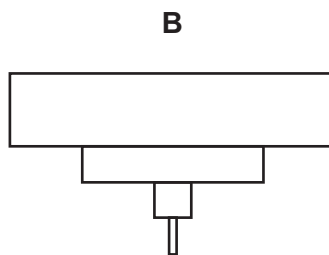
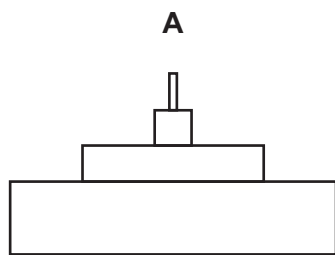
How many of these characteristics show continuous variation?

A one **B** two **C** three **D** four

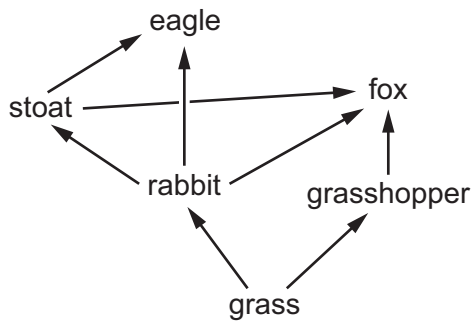
33 The diagram shows a pyramid of biomass for a food chain in a woodland ecosystem.



What is the pyramid of numbers for this food chain?



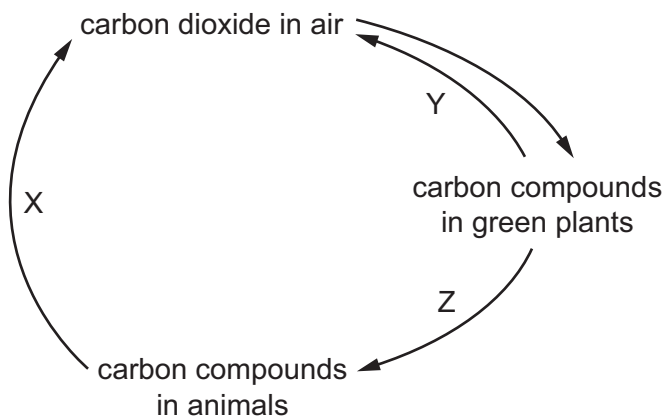
34 The diagram shows a food web.



Which statement about this food web is correct?

- A It has five carnivores.
- B It has five consumers.
- C It has one herbivore.
- D It has two producers.

35 The diagram represents part of the carbon cycle.

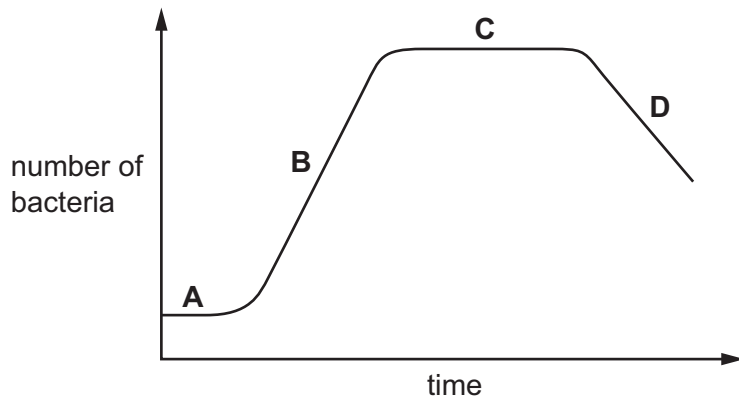


Which processes are represented by X, Y and Z?

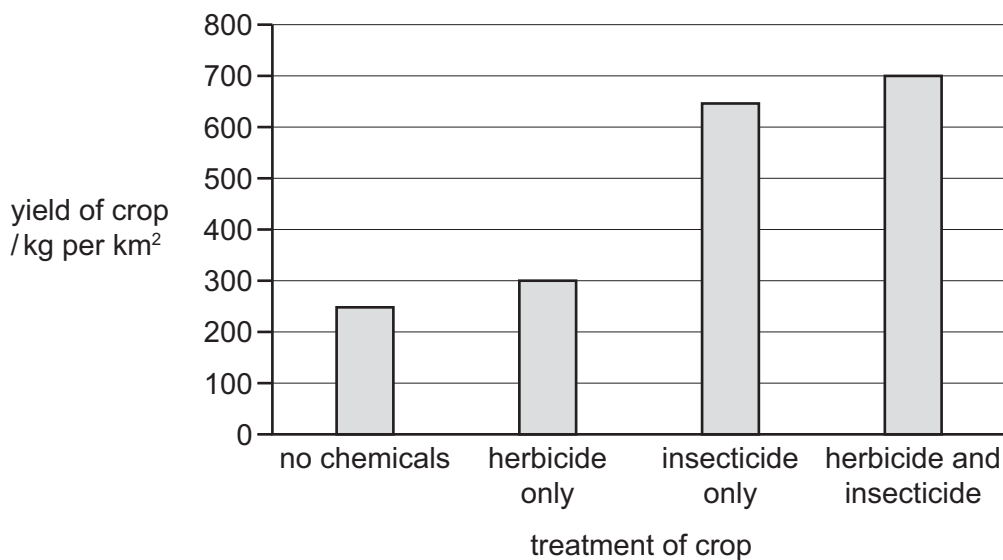
	X	Y	Z
A	photosynthesis	feeding	combustion
B	respiration	respiration	feeding
C	combustion	feeding	photosynthesis
D	feeding	respiration	combustion

36 The graph shows a population growth curve for bacteria.

Which letter identifies the lag phase on the graph?



37 The graph shows the yields of a crop when treated with different combinations of a herbicide and an insecticide.



Which conclusions can be made about the treatment of the crop with the herbicide and the insecticide?

- 1 Adding the herbicide and the insecticide together increases the crop yield the most.
- 2 Adding the insecticide only has a bigger effect on crop yield than adding the herbicide only.
- 3 Adding the insecticide must kill all insect pests that consume the crop.

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

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

- A** increase in flooding
- B** increase in species
- C** loss of habitats
- D** loss of soil

39 Which row correctly shows if each gas is responsible for the enhanced greenhouse effect?

	carbon dioxide	methane
A	no	no
B	no	yes
C	yes	no
D	yes	yes

40 What is an example of genetic modification?

- A** inserting a gene for human insulin production into bacteria
- B** selective breeding to produce cattle with high milk yields
- C** using herbicides to kill unwanted plants
- D** using insecticides to kill insect pests

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (Cambridge University Press & Assessment) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in our Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge International Education is the name of our awarding body and a part of Cambridge University Press & Assessment, which is a department of the University of Cambridge.