Cambridge Assessment International Education

Cambridge IGCSE™

BIOLOGY **0610/11**

Paper 1 Multiple Choice (Core) **October/November 2025**

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.
- 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.

IB25 11_0610_11/6RP

[Turn over

1 Which three characteristics apply to all organisms?

A egestion, movement and photosynthesis

B egestion, movement and respiration

C excretion, movement and respiration

D excretion, photosynthesis and respiration

2 The song thrush, *Turdus philomelos*, is a bird.

What is the genus of this bird?

A *philomelos*

B song

C thrush

D *Turdus*

3 How many pairs of jointed legs does an arachnid have?

A two pairs only

B three pairs only

C four pairs only

D more than four pairs

4 Which structure is found in bacterial cytoplasm but **not** in the cytoplasm of animal cells?

A cell membrane

B cell wall

C nucleus

D plasmid

5 Which row correctly matches a type of specialised cell with its function?

	type of cell	function
A	ciliated cell	absorption of nutrients
B	palisade mesophyll cell	production of starch
C	root cortex cell	absorption of mineral ions from the soil
D	white blood cell	transport of oxygen

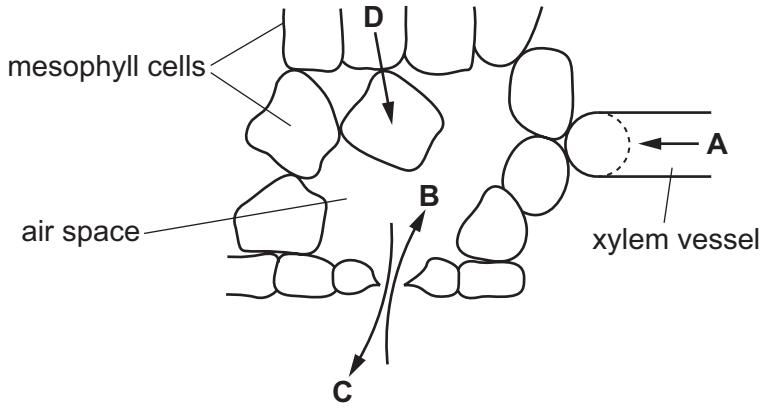
6 Different factors affect the rate of diffusion of molecules across a membrane.

Which row shows the changes that will result in the greatest increase in the rate of diffusion?

	concentration gradient across a membrane	thickness of the membrane	surface area of the membrane	temperature
A	decrease	decrease	decrease	increase
B	decrease	increase	increase	decrease
C	increase	decrease	increase	increase
D	increase	increase	decrease	decrease

7 The diagram shows part of a cross-section of a leaf.

Which arrow shows the movement of water by osmosis in the leaf?



8 The table shows the results of some food tests.

Which row shows a food that contains carbohydrates only?

	Benedict's solution test	biuret test	ethanol emulsion test	iodine solution test
A	blue	purple	clear	blue-black
B	blue	blue	cloudy	yellow-brown
C	red	blue	clear	blue-black
D	red	purple	cloudy	yellow-brown

9 What catalyses the chemical reactions needed to sustain life in organisms?

A enzymes

B hormones

C mitochondria

D ribosomes

10 Which process in plant cells requires chlorophyll?

A fertilisation

B nutrition

C movement

D respiration

11 Which molecule contains nitrogen?

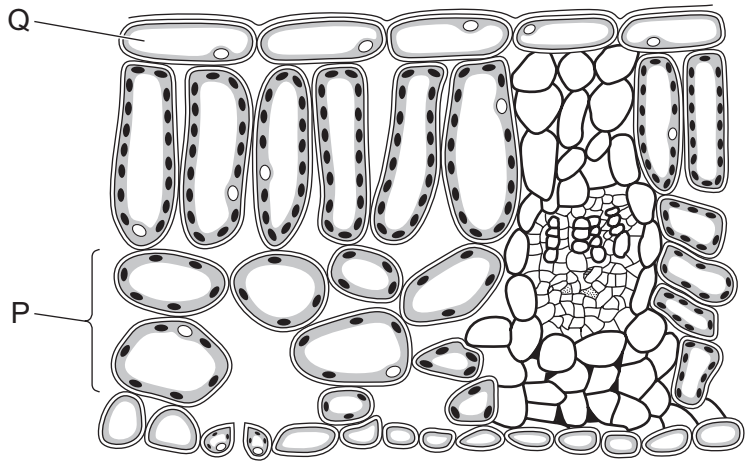
A fat

B glucose

C protein

D starch

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



Which row correctly identifies tissue P and the tissue that contains cell Q?

	P	Q
A	palisade mesophyll	cuticle
B	palisade mesophyll	upper epidermis
C	spongy mesophyll	cuticle
D	spongy mesophyll	upper epidermis

13 Which nutrients in the diet prevent rickets?

A calcium and vitamin C

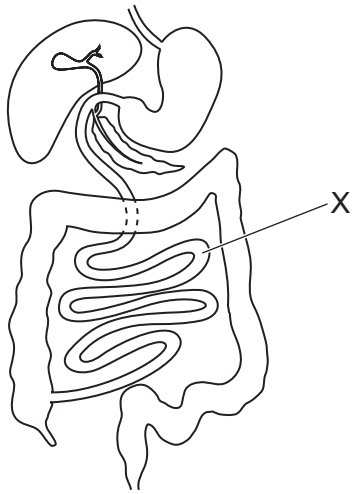
B calcium and vitamin D

C iron and vitamin C

D iron and vitamin D

[Turn over

14 The diagram shows part of the human digestive system.



What is a function of the part labelled X?

A absorption

B egestion

C excretion

D ingestion

15 What increases the surface area of food for the action of enzymes?

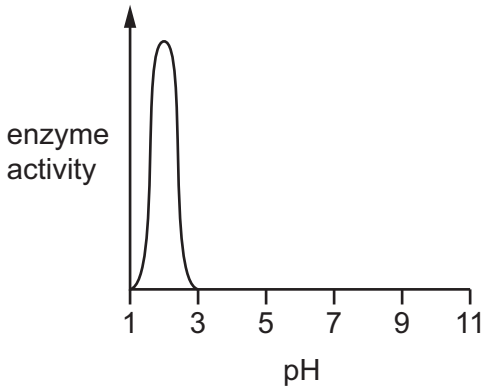
A absorption

B active transport

C respiration

D physical digestion

16 The graph shows the effect of pH on the activity of an enzyme.



In which part of the alimentary canal would this enzyme be **most** active?

A large intestine

B mouth

C small intestine

D stomach

17 Which processes occur during transpiration?

1 Water diffuses from the air spaces into the mesophyll cells.

2 Water evaporates from surfaces of mesophyll cells into air spaces.

3 Water from air spaces evaporates through stomata.

4 Water vapour from air spaces diffuses through stomata.

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

18 What is the sequence in which blood flows through the circulatory system?

A arteries → veins → capillaries → heart

B capillaries → arteries → heart → veins

C capillaries → veins → heart → arteries

D heart → veins → arteries → capillaries

[Turn over

19 Which row identifies methods that will reduce the spread of disease?

	treating sewage	washing hands regularly	providing clean drinking water
A	✓	✓	✓
B	✓	✓	✗
C	✓	✗	✓
D	✗	✓	✓

key

✓ = a method that will reduce the spread of disease

✗ = a method that will **not** reduce the spread of disease

20 Which chemical can be used to show the presence of carbon dioxide?

A Benedict's solution

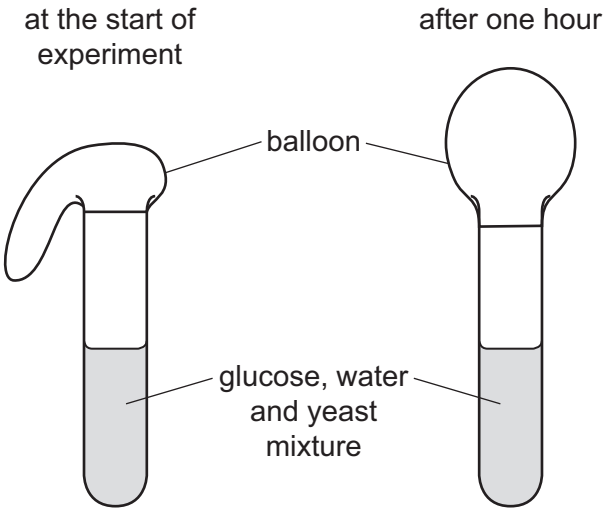
B biuret reagent

C DCPIP

D limewater

21 A mixture of glucose, yeast and water was placed in a test-tube. A balloon was attached to the open end of the test-tube. The apparatus was kept at 30 °C for one hour.

The diagram shows the apparatus.



Which word equation can be used to explain what happened to the balloon after one hour?

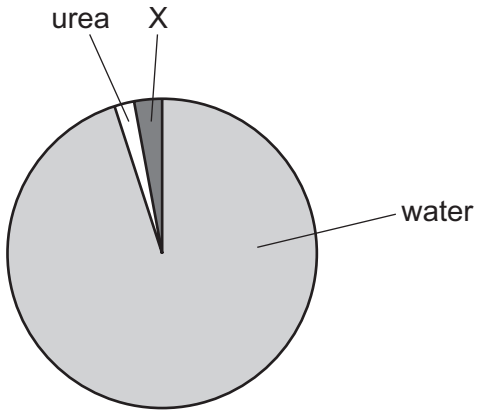
A carbon dioxide + water → glucose + oxygen

B glucose → alcohol + carbon dioxide

C glucose → carbon dioxide + water

D glucose → lactic acid

22 Urine is formed from the substances excreted by the kidneys. The pie chart shows the composition of urine in a healthy person.



What is label X?

A ions

B platelets

C starch

D sucrose

23 Which hormone increases pupil diameter and is secreted in 'fight or flight' situations?

A adrenaline

B insulin

C oestrogen

D testosterone

24 Which responses are usually shown by the root of a plant?

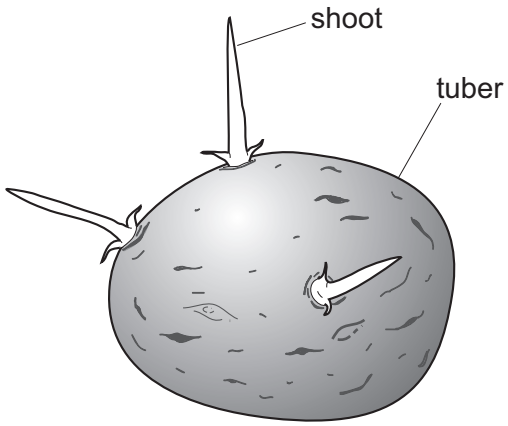
	gravitropism	phototropism
A	–	–
B	–	+
C	+	–
D	+	+

key

+ = grows towards the stimulus

– = grows away from the stimulus

25 The diagram shows a potato tuber that developed from the stem of a parent potato plant. Three shoots are starting to grow from the tuber.



How do the genotypes of the shoots compare with the genotypes of the tuber and of the parent?

	genotype of tuber	genotype of parent
A	is different to the shoots	is different to the shoots
B	is different to the shoots	is identical to the shoots
C	is identical to the shoots	is different to the shoots
D	is identical to the shoots	is identical to the shoots

26 What is a feature of wind-pollinated flowers?

A anthers inside the flower

B large, brightly coloured petals

C long, feathery stigmas

D production of nectar

27 Which parts of the gametes fuse during fertilisation?

A cell membranes

B cell walls

C cytoplasm

D nuclei

28 The statements are about some hormones in the human body.

V promotes the development of breast tissue.

W promotes the development of stronger muscles.

X causes the voice to deepen at puberty.

Y is produced by the pancreas.

Which statements are correct for testosterone?

A V and W **B** V and Y **C** W and X **D** X and Y

29 Which type of organism causes an infection that may lead to AIDS?

A amphibian

B bacterium

C myriapod

D virus

30 What does a gene code for?

A an amino acid

B a carbohydrate

C a fat

D a protein

31 Which row shows the sex chromosomes present in human body cells?

	sex	sex chromosomes present
A	female	XX
B	female	XY
C	male	XX
D	male	YY

32 An individual who is homozygous dominant for a characteristic has the genotype TT. Another individual is heterozygous for this characteristic.

What is the correct percentage of genotypes for the offspring resulting from a genetic cross between these two individuals?

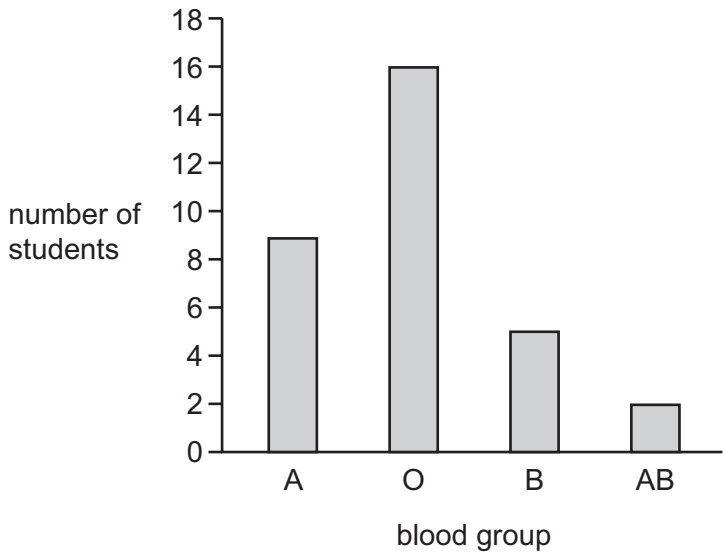
A 100% Tt

B 50% TT, 50% tt

C 50% TT, 50%Tt

D 25%TT, 50% Tt, 25% tt

33 The graph shows the number of students with each blood group in a class.



What can be concluded about blood groups from the graph?

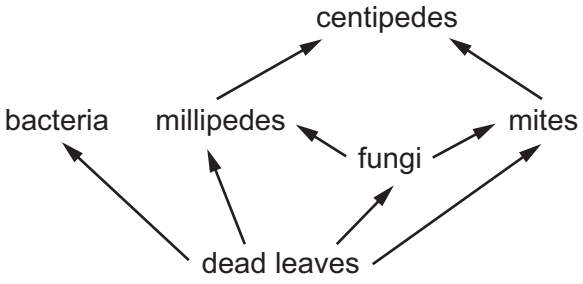
A Blood groups are an example of continuous variation caused by genes and the environment.

B Blood groups are an example of continuous variation caused by genes only.

C Blood groups are an example of discontinuous variation caused by genes and the environment.

D Blood groups are an example of discontinuous variation caused by genes only.

34 The diagram shows part of a food web in a pile of dead leaves.

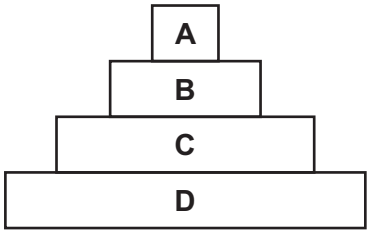


Which row describes the organisms?

	bacteria	centipedes	leaves
A	consumers	herbivores	producers
B	decomposers	carnivores	decomposers
C	decomposers	consumers	producers
D	producers	carnivores	producers

35 The diagram shows an ecological pyramid.

Which letter represents the producers?

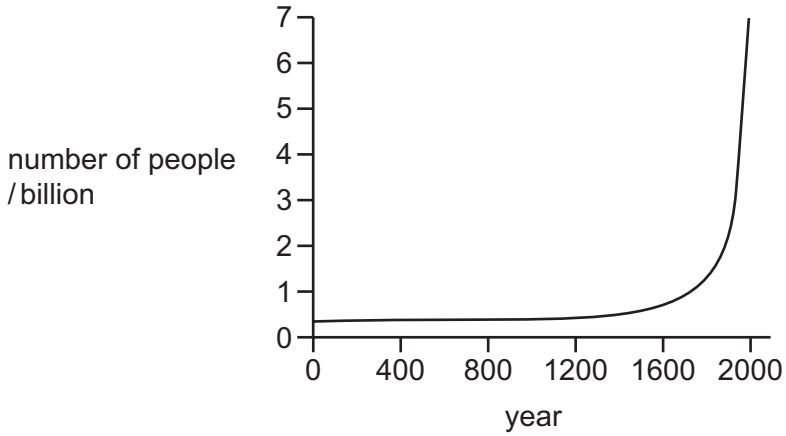


36 The diagrams show the movement of two gases during the day and during the night.

Which letters represent carbon dioxide?

A W and Y **B** W and Z **C** X and Y **D** X and Z

37 The graph shows the estimated growth of the human population.



Which phase of population growth is occurring between the years 1600 and 2000?

A death phase

B exponential (log) phase

C lag phase

D stationary phase

38 Which statement describes a sustainable resource?

A a resource that does **not** require conserving

B a resource that is produced as rapidly as it is removed from the environment

C a resource that is produced using genetic modification

D a resource that results in habitat destruction when extracted from the environment

39 What increases the chance of conserving endangered species?

A climate change

B education

C hunting

D introducing new species

40 Four statements about genetic modification in crop plants are listed.

1 They can reduce the amount of herbicide used.

2 They can reduce the amount of insecticide used.

3 They can reduce the damage by pests to crop plants.

4 They can reduce the nutritional quality of crop plants.

Which statements give reasons why genetic modification is used in crop production?

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

BLANK PAGE