Cambridge IGCSE Biology

Most Frequent Question Paper 2

JOIN NOW

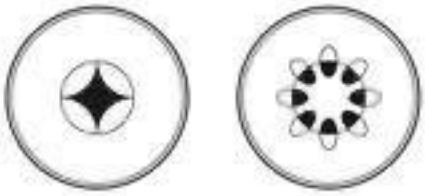
click here to get answers and explanations

1 A plant was placed in water containing black dye. After 24 hours the plant was removed and sections were taken from the root and the stem.

Which diagram shows the results?

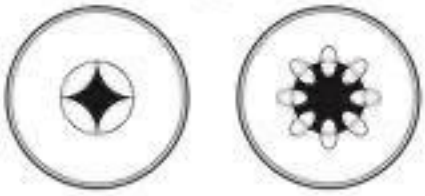
CLICK FOR EXPLANATION

A



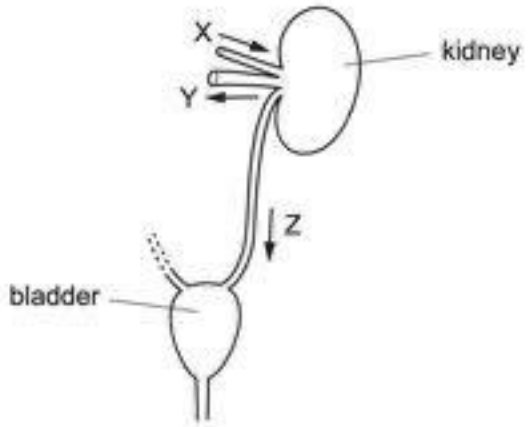
B

C



D

2 The diagram shows structures in a human which form and store urine. Liquids pass through tubes X, Y and Z in the directions shown by the arrows.



Which statement about the volume of liquid passing through Y in one day is correct?

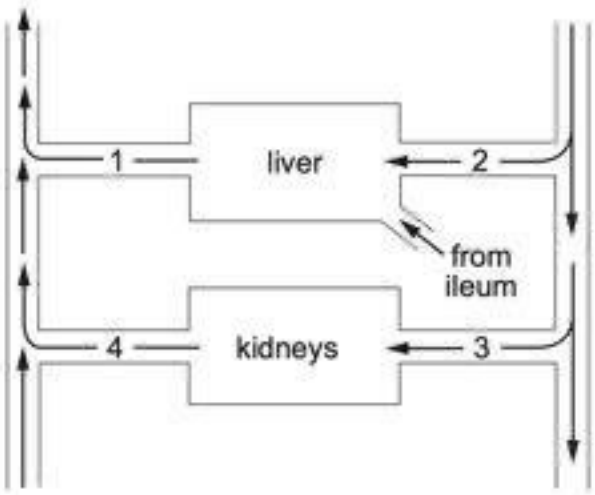
A It is greater than that passing through X.

B It is less than that passing through Z.

C It is much less than that passing through X but slightly greater than that passing through Z.

D It is slightly less than that passing through X but much greater than that passing through Z.

3 The diagram represents the blood supply to the liver and to the kidneys.



Which vessels contain blood with the highest and lowest concentrations of urea?

	highest	lowest
A	1	2
B	1	4
C	3	2
D	3	4

4 One gene has two codominant alleles, A^E and A^F, and one recessive allele, A^G.

How many different genotypes and phenotypes are possible?

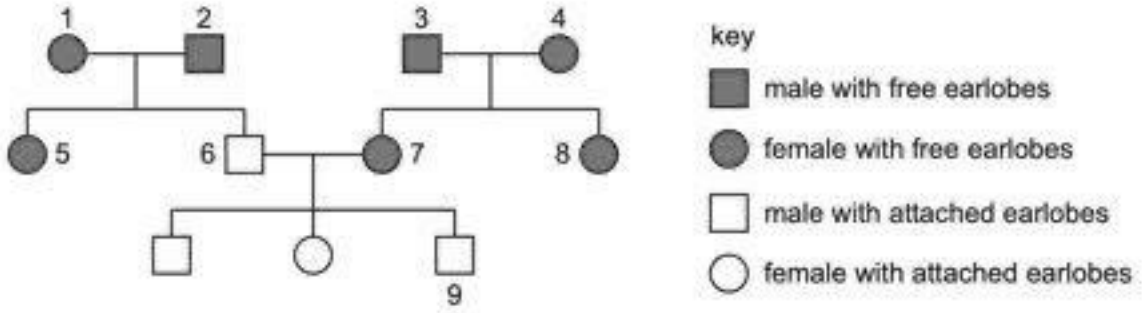
	genotypes	phenotypes
A	3	3
B	4	6
C	6	4
D	6	6

Get the Full Package:
Questions, Notes
Answers & Explanations

5 Earlobes can either be attached to the cheek or be 'free' (unattached). This characteristic is controlled by a single gene.

The allele for attached earlobes is recessive.

The diagram shows the inheritance of attached earlobes in one family.



Which two individuals **must** be heterozygous for earlobe attachment?

A 1 and 7 **B** 3 and 4 **C** 5 and 8 **D** 6 and 9

6 A man of genotype I^AI^o and woman of genotype I^BI^o have a child.

What is the chance that the child will have the same blood group as one of its parents?

A zero **B** 1 in 4 **C** 1 in 2 **D** 3 in 4

7 Dianthus flowers can be one of three different colours: red, pink or white.

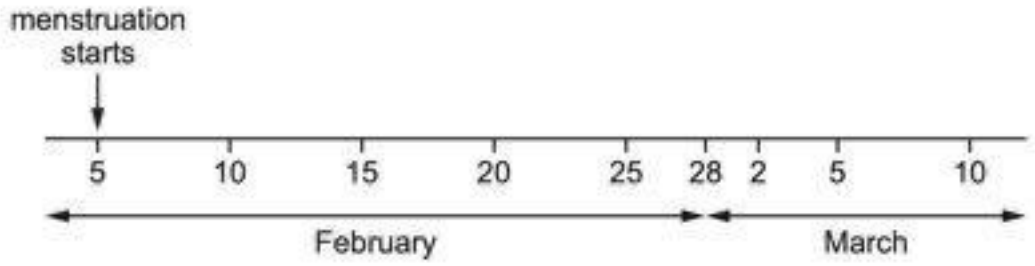
A red flower is always homozygous and a white flower is always homozygous. Pink flowers are heterozygous.

If a red and a white flower are crossed, what percentage of the offspring will be pink?

A 0% **B** 25% **C** 75% **D** 100%

**Get the Full Package:
Questions, Notes
Answers & Explanations**

8 The diagram shows a calendar for 33 days in February and March.



A girl, who has a regular menstrual cycle of 28 days, begins menstruation on 5 February.

During which dates would the progesterone concentration in her blood rise most rapidly?

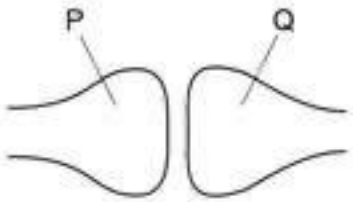
A 5–12 February

B 13–19 February

C 20–26 February

D 27 February – 5 March

9 The diagram shows a synapse in a reflex arc.

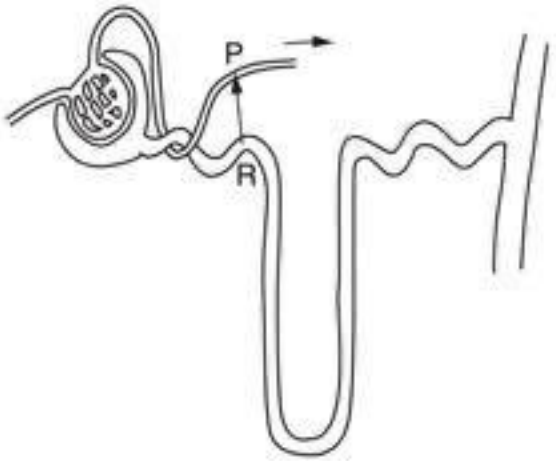


What are the identities of the two neurones and in which direction does the neurotransmitter pass?

	neurone P	neurone Q	direction of passage of neurotransmitter
A	motor	relay	P → Q
B	motor	sensory	P → Q
C	relay	motor	Q → P
D	relay	sensory	Q → P

Get the Full Package:
Questions, Notes
Answers & Explanations

10 The diagram shows a kidney tubule and some of its associated blood vessels.



Which substance is entirely reabsorbed from the fluid at R to the blood at P?

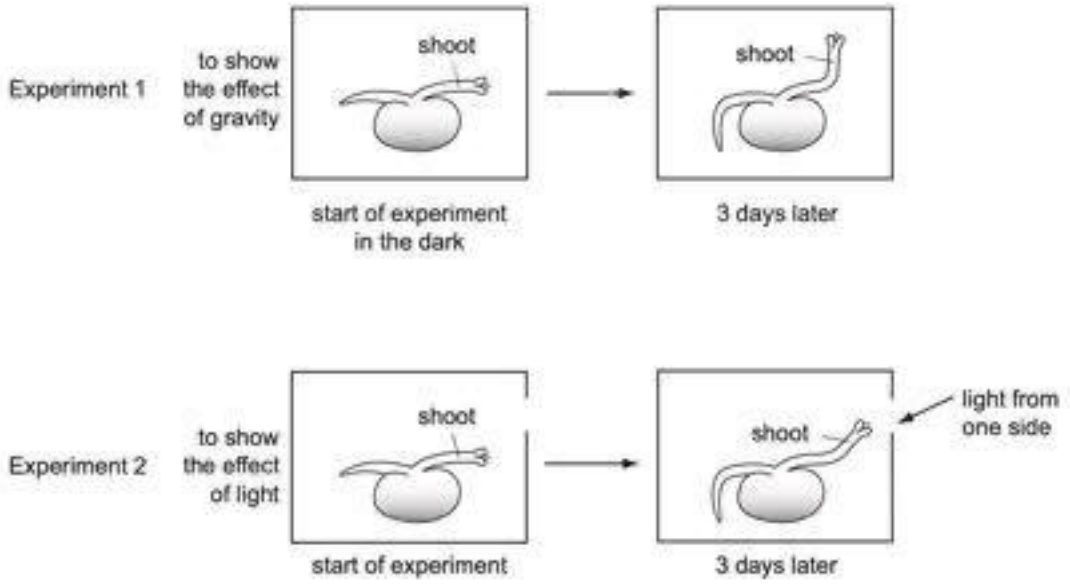
A glucose

B salts

C urea

D water

11 **27** The diagram shows seedlings in two experiments on the tropic response of seedlings to gravity and light.



How have the seedlings responded?

	to gravity	to light
A	✓	✓
B	✓	✗
C	✗	✓
D	✗	✗

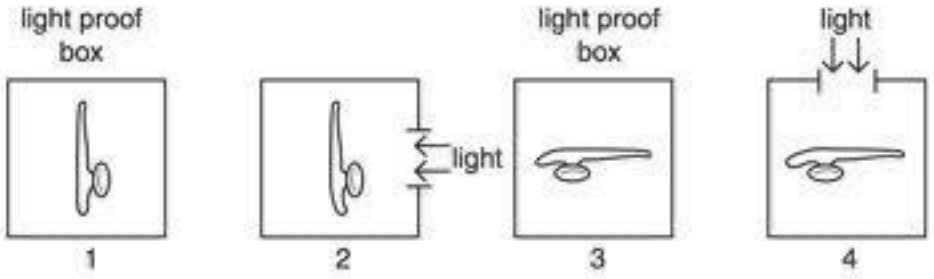
key

✓ = tropic response shown

✗ = no tropic response shown

12 Some roots are known to be gravitropic.

Which pair of diagrams show a controlled experiment to find out if these roots are also phototropic?



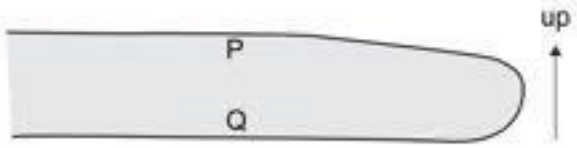
A 1 and 2

B 1 and 3

C 2 and 3

D 2 and 4

13 The diagram shows a shoot that has been placed on its side. The shoot begins to grow upwards.



What causes the shoot to grow upwards?

A increased cell division by meiosis at P

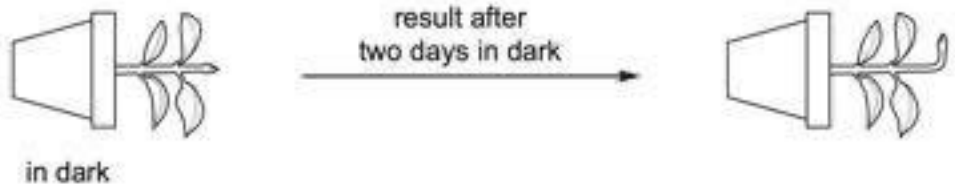
B increased cell division by mitosis at P

C more cell elongation at P than Q

D more cell elongation at Q than P

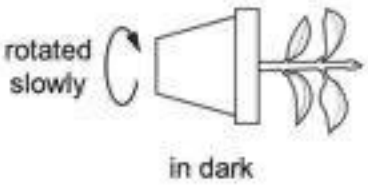
Get the Full Package:
Questions, Notes
Answers & Explanations

14 The diagram shows an experiment to investigate the response of a plant stem to gravity.

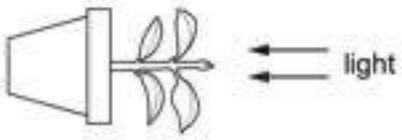


What is a suitable control for this experiment?

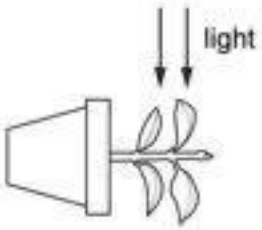
A



B

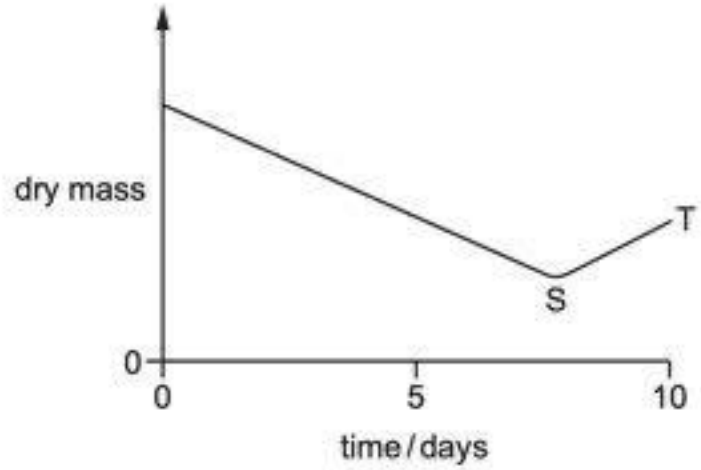


C



D

15 The graph shows changes in the dry mass of a seed as it germinates and grows.



What causes the change shown between points S and T?

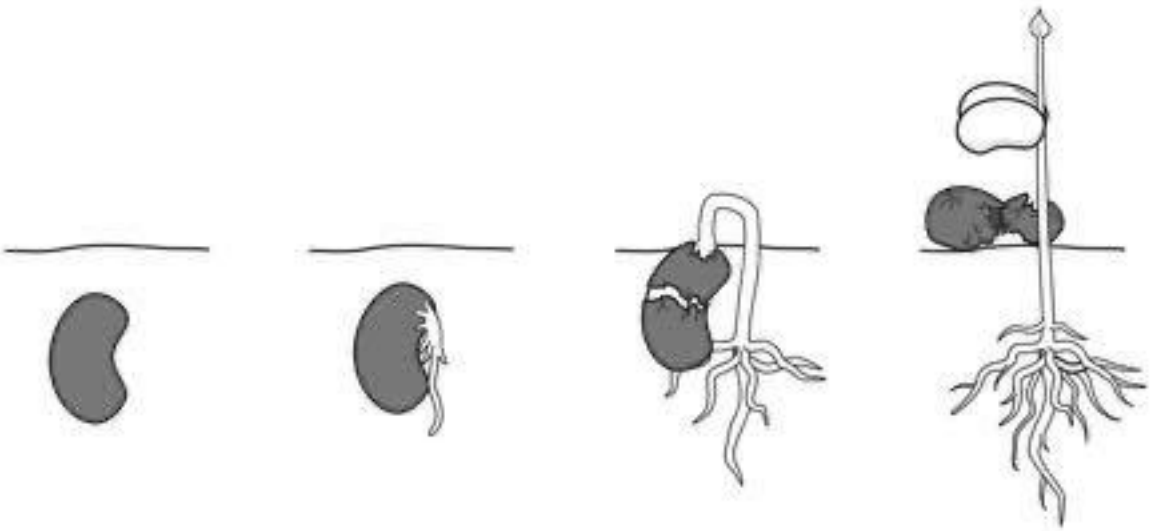
A osmosis

B photosynthesis

C respiration

D transpiration

16 The diagram shows how a seed changes after it is planted in soil and watered.



Which characteristics of living things are demonstrated by this sequence?

A excretion and growth

B growth and sensitivity

C nutrition and reproduction

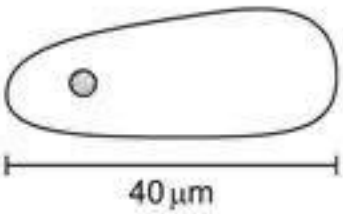
D nutrition and sensitivity

17 The length of a specimen in a photograph is 45 mm. Its actual length is 25 mm.

What is the magnification of the photograph?

A ×0.6 **B** ×1.6 **C** ×1.8 **D** ×1125

18 The diagram shows a pollen grain of a rice plant. The size of the image is 40 mm



The actual length of the pollen grain is 40 μm.

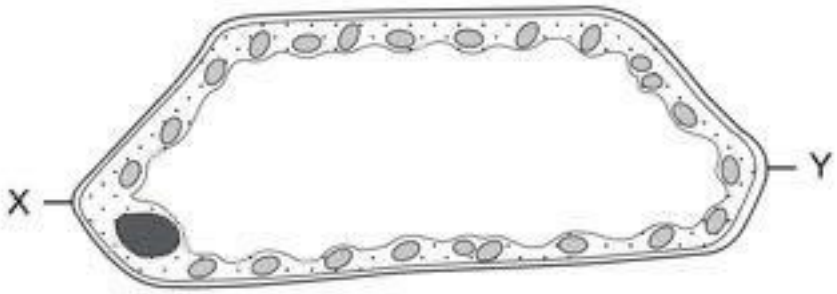
By how many times has the diagram been magnified?

A ×1 **B** ×10 **C** ×100 **D** ×1000

19 The diagram shows a high-power drawing of a plant cell.

The distance between X and Y on the diagram below is 80 mm.

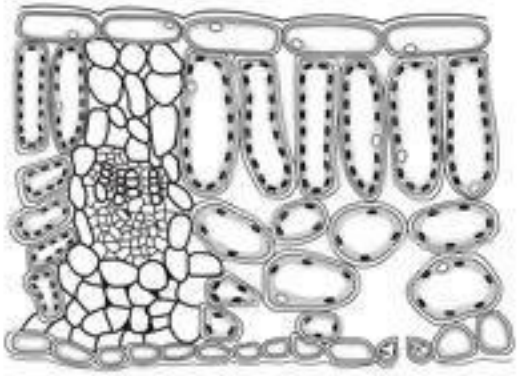
The actual length of the cell between X and Y was 160 μm.



What is the magnification of the cell?

A ×50 **B** ×100 **C** ×500 **D** ×1000

20 The actual thickness of the leaf shown in the diagram is 2000 μm, but its thickness in the diagram is 50 mm.

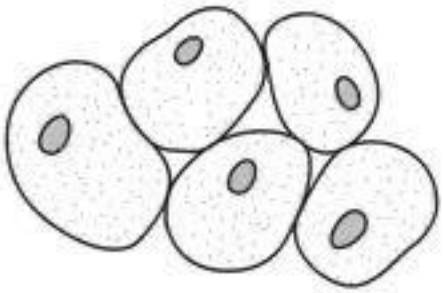


What is the magnification of the diagram?

A ×0.025 **B** ×25 **C** ×100 **D** ×100 000

**Get the Full Package:
Questions, Notes
Answers & Explanations**

21 The diagram shows some liver cells as they appear under a microscope.



How many cell walls can be seen?

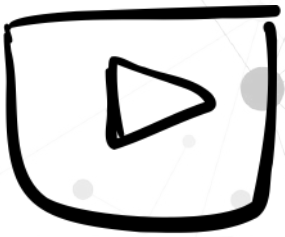
A 0 **B** 2 **C** 5 **D** 10

22 The diagram shows an insect.

Use the key to identify the insect.

1	wings present	go to 2
	wings absent	**A**
2	two pairs of wings	go to 3
	one pair of wings	**B**
3	wings with circular markings	**C**
	wings without circular markings	**D**

The Complete Course for IGCSE Biology



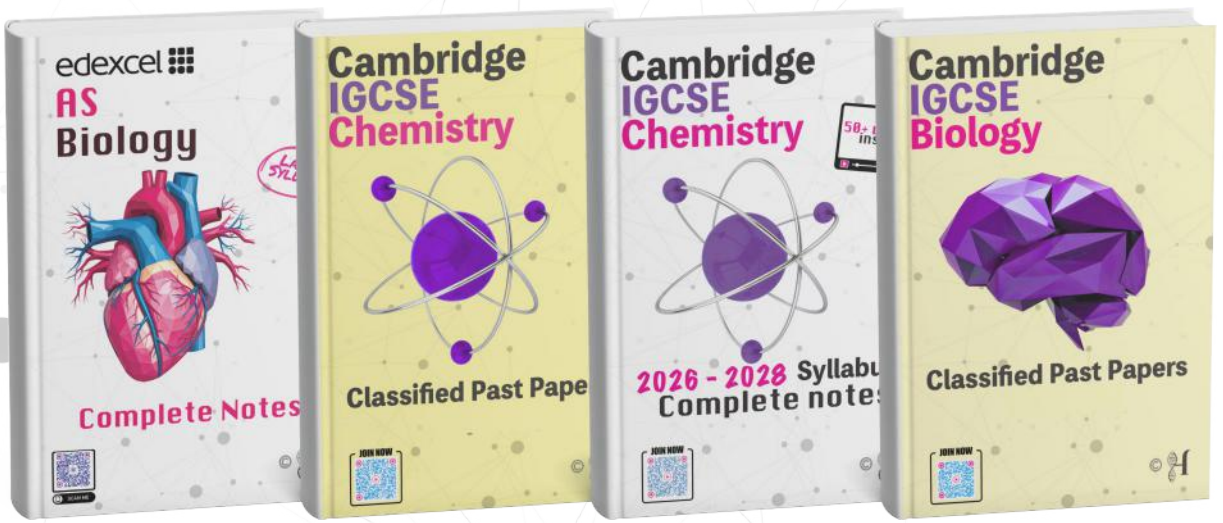
Videos that cover the entire syllabus

Exam-expert solved past papers

Test your knowledge on each topic.

JOIN NOW

Also Available:



CHEM-BIO.INFO

WHATSAPP

51375709

50144115

chem_bio.info