



EXAM PAPERS PRACTICE

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Designed to test your ability and

9.3 Growth in Plants

Easy



BIOLOGY

IB HL

9.3 Growth in Plants

Question Paper

Course	DP IB Biology
Section	9. Plant Biology (HL Only)
Topic	9.3 Growth in Plants
Difficulty	Easy

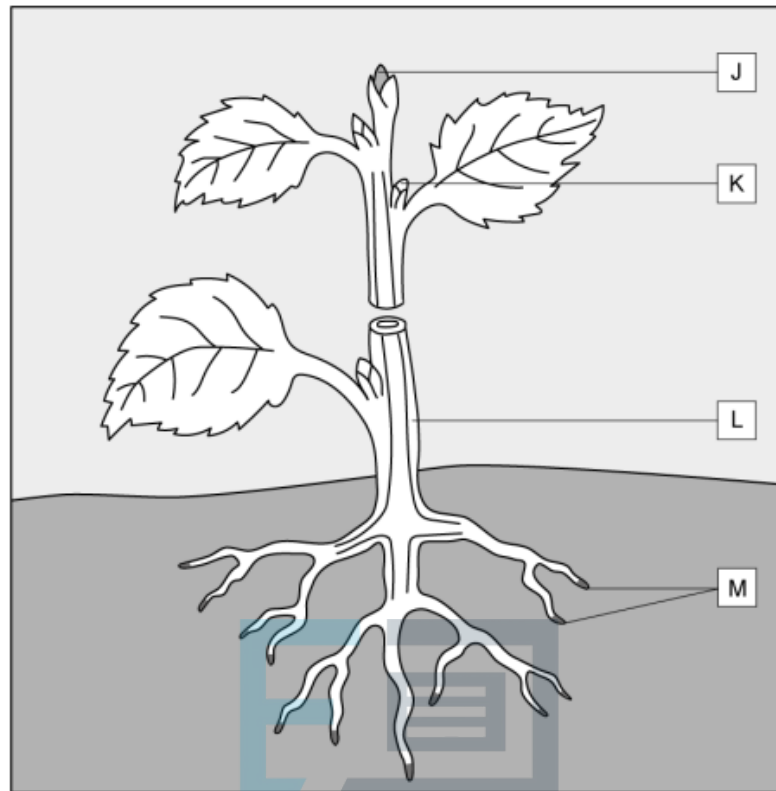
EXAM PAPERS PRACTICE

Time allowed: 10
Score: /5
Percentage: /100



Question 1

Which row of the table correctly identifies the parts labelled **J**, **K**, **L** and **M** on the diagram below?



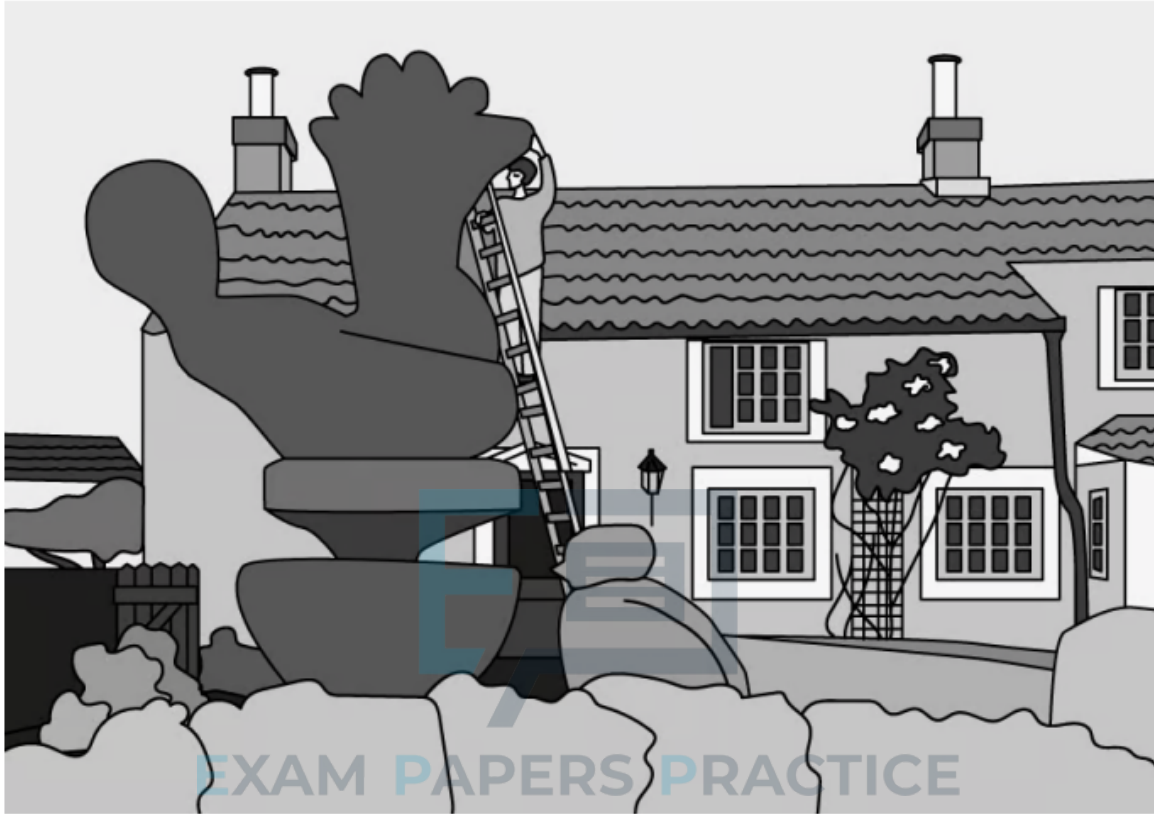
	J	K	L	M
A.	axillary bud	shoot apical meristem	root apical meristem	lateral meristem
B.	shoot apical meristem	axillary bud	lateral meristem	root apical meristem
C.	lateral meristem	shoot apical meristem	root apical meristem	axillary bud
D.	shoot apical meristem	lateral meristem	axillary bud	root apical meristem

[1 mark]



Question 2

The image below shows an example of topiary, an art form in which gardeners trim species of plants such as privet (*Ligustrum ovalifolium*) to form decorative shapes in gardens. The gardener is shown here on a ladder, trimming the upper parts of the topiary shape.



What phenomenon of plant growth allows such forms to be shaped in plants?

- A. Negative geotropism
- B. Cell differentiation in the shoot apex
- C. Apical dominance
- D. Production of the plant hormone indole-3-acetic acid (IAA)

[1 mark]

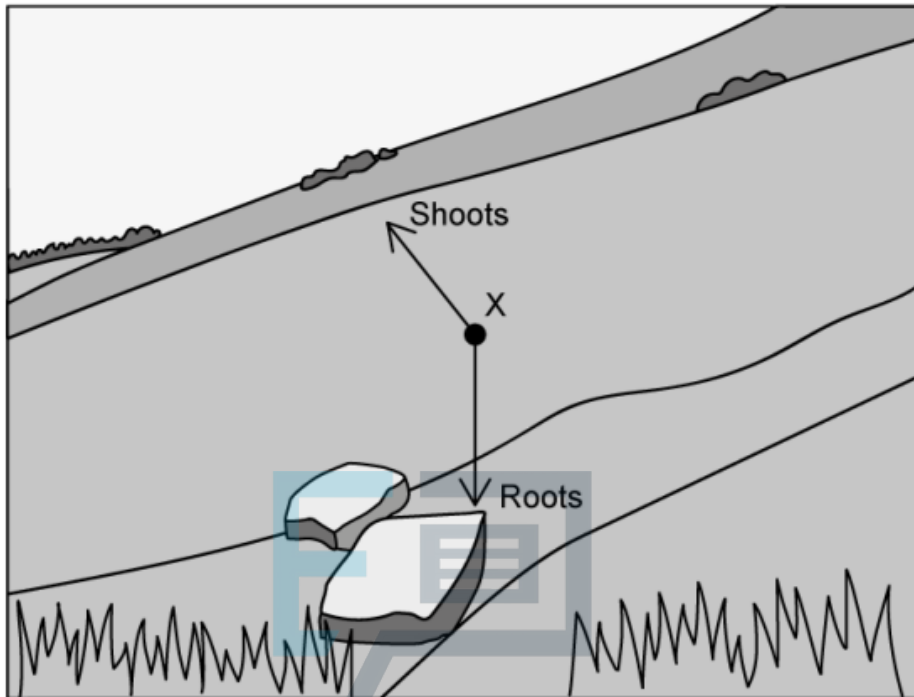


Question 3

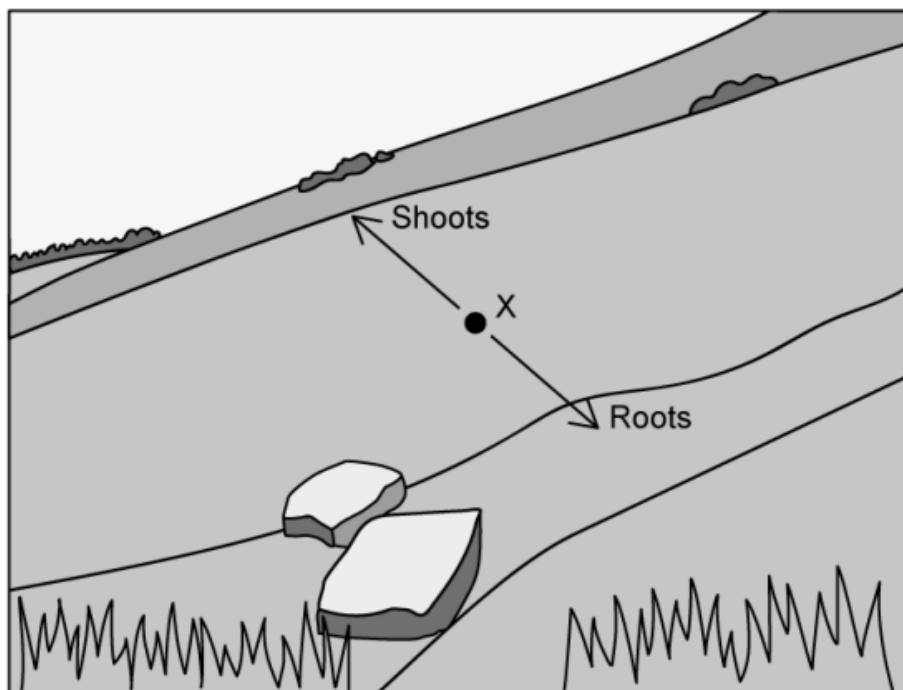
A sycamore tree seed lands on sloping ground at a particular spot, shown as **X** in the diagrams. Conditions there are favourable to the sycamore seed's germination.

Which diagram of **A – D** best shows the direction of growth of the tree's shoots and roots in its early life after germination of the seed?

A.

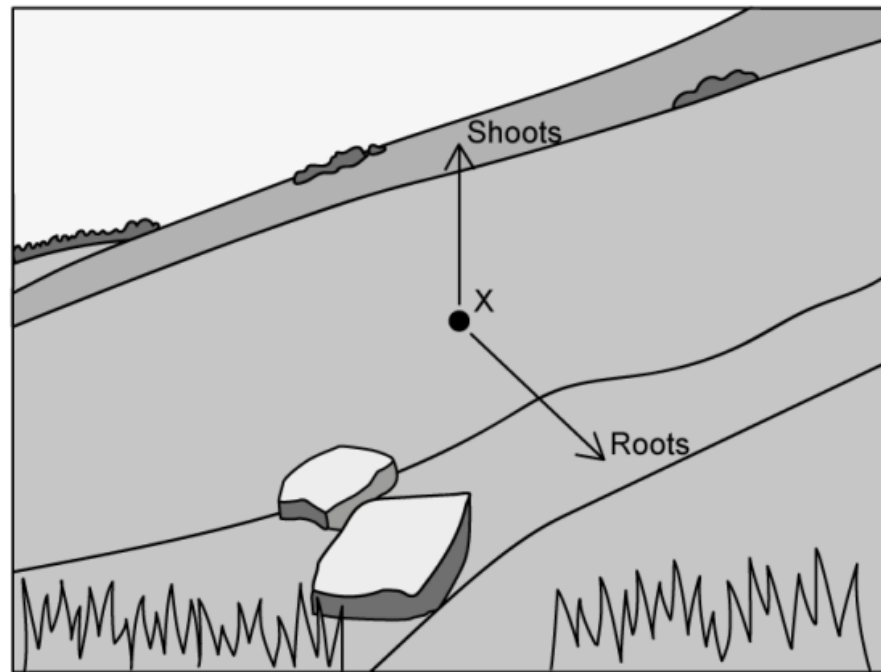


B.

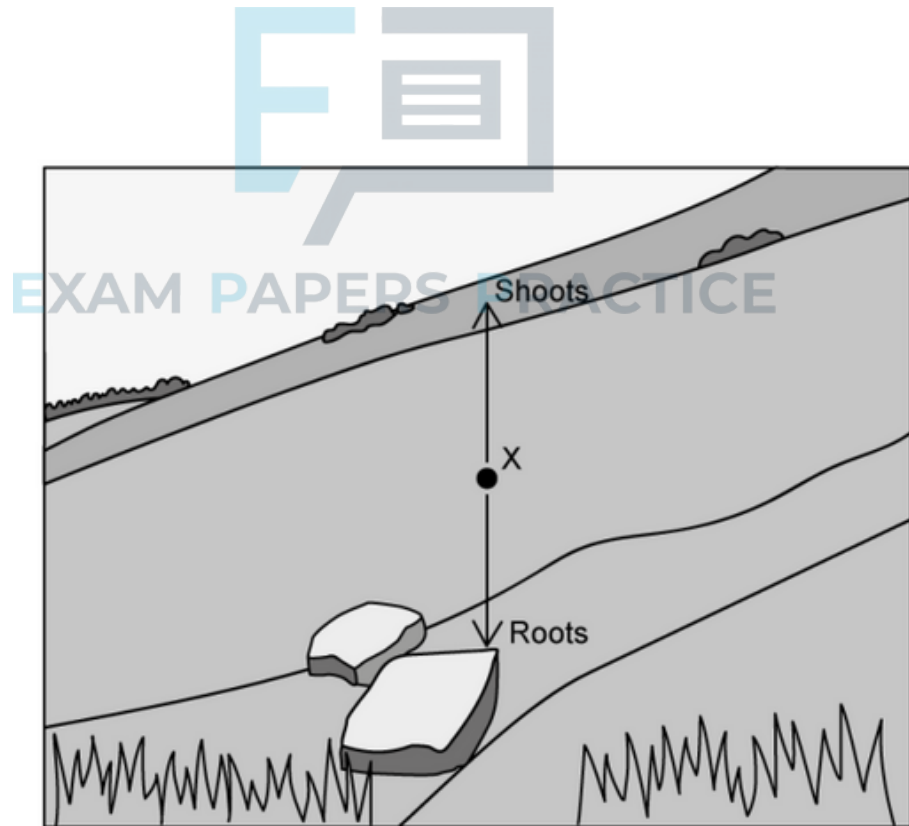




C.



D.



[1 mark]

Question 4

Which row of the table gives the most accurate summary of the actions of auxins?

	In shoots	In roots
A.	Cells elongate	Growth inhibited
B.	Cells grow in number	Growth inhibited
C.	Cells elongate	Growth promoted
D.	Cells grow in number	Growth promoted

[1 mark]

Question 5

Which of the following statements are true for the activity of micropropagation of plants?

- I. Explants are sterilised to reduce the risk of microbial contamination of the culture medium
- II. Micropropagation produces a desirably high amount of variation within the culture
- III. Explants can give rise to whole new plants thanks to totipotent cells in their meristems
- IV. Plant hormones are not used in micropropagation until the new plants are full-sized
- V. New plants are able to grow in soil once their roots and shoots have developed, after micropropagation

- A. II, III and IV
- B. I and III only
- C. I, III and V
- D. All of them

[1 mark]