18.2 Adaptive features

01. 0610_m22_qp_22 Q: 35

Some plants have small leaves with thick waxy cuticles.

Which row describes the effect of these features on water loss and the type of plant that has these features?

	effect on water loss	type of plant
A	decreases	hydrophyte
B	decreases	xerophyte
C	increases	hydrophyte
D	increases	xerophyte

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02. 0610_m21_qp_22 Q: 36

Which leaf feature is an adaptation of xerophytes to their environment?

A hairs surrounding stomata

B large internal hollow spaces

C large numbers of stomata

D thin cuticle on both surfaces

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03. 0610_s21_qp_22 Q: 35

Which feature would help a plant to survive in a dry environment?

A large leaves

B many stomata

C small roots

D thick waxy cuticle

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04. 0610_s21_qp_23 Q: 36

Adaptive features are inherited features that increase fitness.

What is the definition of fitness?

A artificial selection to improve organisms

B the change in adaptive features of a population over time

C the probability of an organism surviving and reproducing in the environment in which it is found

D the probability of variation in a population

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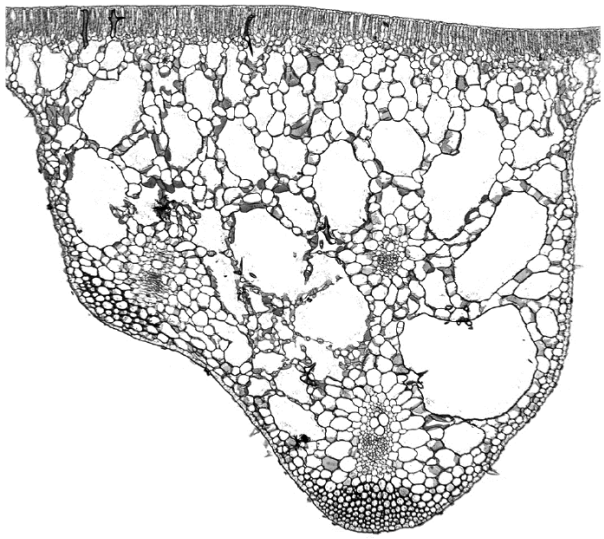
05. 0610_w21_qp_21 Q: 34

The diagram shows a section through the leaf of a water lily.



Water lilies are hydrophytes.

They have larger air spaces than most other plants.

How does this adaption help the lily to survive?

A increases the number of chloroplasts for photosynthesis

B makes the leaf buoyant enough to float on water

C provides more space for the xylem and phloem

D speeds up gas exchange between the leaf and water

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06. 0610_w21_qp_22 Q: 33

What is an adaptive feature of xerophytes?

A They do not have root hair cells.

B Their leaves have a large surface area.

C They have many stomata.

D Their leaves have thick cuticles.

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07. 0610_s20_qp_21 Q: 34

Which adaptation may be present in a xerophyte?

A leaves with small surface area and large numbers of stomata

B little or no xylem tissue and leaves with large surface area

C stomatal hairs and rolled leaves

D thin or no cuticle and deep roots

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08. 0610_w20_qp_22 Q: 34

Desert plants have evolved to survive in places where very little water is available.

Which process is reduced to enable them to retain as much water as possible?

A transpiration

B translocation

C respiration

D digestion

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09. 0610_s19_qp_21 Q: 35

Which statement describes how a species becomes adapted to its environment?

A Genetic similarities give rise to different genotypes which may have a reproductive advantage.

B Genetic variation gives rise to different phenotypes which may have a reproductive advantage.

C Phenotypic similarities give rise to different genotypes which may have a reproductive advantage.

D Phenotypic variation gives rise to different phenotypes which may have a reproductive advantage.

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10. 0610_w19_qp_21 Q: 33

The diagram shows a hydrophyte in a lake.

Which statement about the leaves is correct?

A They cannot photosynthesise.

B They have a thick cuticle.

C They have large air spaces in the spongy mesophyll.

D They require many xylem vessels for support.

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11. 0610_w19_qp_22 Q: 33

What is a feature of some xerophytes?

A large air spaces in the tissues

B leaves rolled up and covered with hairs

C leaves with stomata on the upper surface

D thin cuticle

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12. 0610_m18_qp_22 Q: 30

Which feature helps a xerophyte survive in its environment?

A flat leaves with a large surface area

B no cuticle

C short roots

D sunken stomata

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13. 0610_s18_qp_22 Q: 34

Fitness is defined as the probability of an organism ……1…… and ……2…… in the environment in which it is found.

Which words correctly complete gaps 1 and 2?

	1	2
A	photosynthesising	respiring
B	reproducing	respiring
C	surviving	reproducing
D	surviving	photosynthesising

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14. 0610_s18_qp_23 Q: 34

Plants are adapted to survive in different environments.

Which are features of xerophytes?

	cuticle	number of stomata
A	thick	few
B	thick	many
C	thin	few
D	thin	many

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15. 0610_m17_qp_22 Q: 33

Which adaptation may be present in a xerophyte?

A leaves with small surface area and large numbers of stomata

B little or no xylem tissue and leaves with large surface area

C stomatal hairs and rolled leaves

D thin or no cuticle and deep roots

---

16. 0610_m16_qp_22 Q: 36

What is **not** a feature of hydrophytes?

A large air spaces in the tissues

B leaves rolled up and covered with hairs

C leaves with stomata on the upper surface

D roots and xylem reduced

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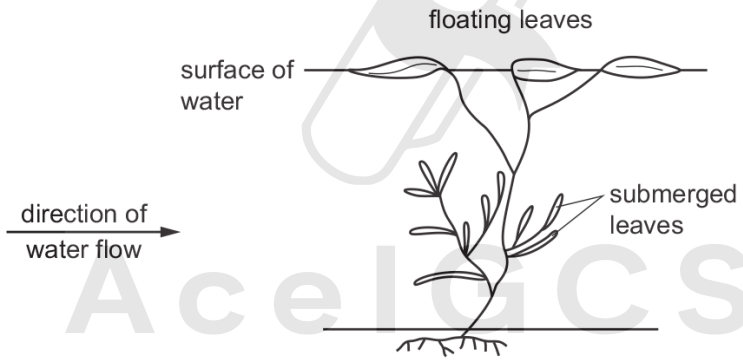
17. 0610_s16_qp_22 Q: 33

The diagram shows a hydrophyte in a river.



Which statement about the submerged leaves is correct?

A They cannot photosynthesise.

B They have a thick cuticle.

C They offer little resistance to water flow.

D They require many xylem vessels for support.

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18. 0610_w16_qp_21 Q: 33

How do the leaves of hydrophytes differ from those of xerophytes?

A smaller stomata

B smaller total surface area

C stomata on the undersides of the leaves

D thinner cuticle

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19. 0610_w16_qp_22 Q: 36

Which is an adaptive feature of hydrophytes?

A large network of roots

B leaves covered with spines

C stomata on the upper surface of the leaves

D water storage in stem

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20. 0610_w16_qp_23 Q: 33

What is an adaptive feature of xerophytes?

A do not have root hair cells

B leaves have large surface area

C stomata are in pits

D thin cuticles

SN	Paper	Q. No.	Answer
01	0610_m22_qp_22	35	B
02	0610_m21_qp_22	36	A
03	0610_s21_qp_22	35	D
04	0610_s21_qp_23	36	C
05	0610_w21_qp_21	34	B
06	0610_w21_qp_22	33	D
07	0610_s20_qp_21	34	C
08	0610_w20_qp_22	34	A
09	0610_s19_qp_21	35	B
10	0610_w19_qp_21	33	C
11	0610_w19_qp_22	33	B
12	0610_m18_qp_22	30	D
13	0610_s18_qp_22	34	C
14	0610_s18_qp_23	34	A
15	0610_m17_qp_22	33	C
16	0610_m16_qp_22	36	B
17	0610_s16_qp_22	33	C
18	0610_w16_qp_21	33	D
19	0610_w16_qp_22	36	C
20	0610_w16_qp_23	33	C