

Question 34 (Answer: B)

- A floating leaf takes in gases from the air above it, not from the water below.
- So its stomata are on the *upper* surface, unlike a land plant's.
- It also needs large air spaces to keep it buoyant, and it needs no long root system in water.

Question 34 (Answer: A)

- An adaptive feature is an inherited characteristic that improves survival and reproduction.
- Competition is the struggle for a resource, not a characteristic.
- An observable feature or phenotype may or may not be adaptive.

Question 32 (Answer: C)

- A hot, dry habitat means the leaf must lose as little water as possible.
- Fewer stomata and a thicker waxy cuticle both cut water loss.
- A smaller surface area also reduces evaporation.

Question 34 (Answer: A)

- A xerophyte is adapted to *reduce* water loss, so a waxy layer must stop evaporation, not increase it.
- Extensive roots maximise the water taken up from a dry soil.
- So look for the diagram whose labels both work in the direction of conserving water.

Question 34 (Answer: C)

- An adaptive feature helps the organism survive and reproduce where it lives – statement 1.
- It is inherited, since it must be passed to the offspring to matter – statement 3.
- It need not show continuous variation, so statement 2 is wrong.

4(a)	inherited ; survive (and) reproduce / breed / produce offspring ;
4(b)	<i>any two from:</i> curled / rolled, leaf ; inner surface is folded ; hairs / AW ; few / sunken, stomata OR stomata in, pits / AW ; thick cuticle ;
4(c)(i)	$0.001276 / 1.276 \times 10^{-3}$ (mm) ;
4(c)(ii)	cellulose ;

4(c)(iii)	<i>any one from:</i> swollen / thick (stem) OR water storage / succulent ; chloroplasts / site of photosynthesis ; thick (waxy) cuticle ; AVP ;
4(d)	<i>any three from:</i> <i>species 1:</i> 1 roots, shallow / close to the surface OR spread, out(wards) / over a wide area (of the soil surface) ; 2 to absorb water immediately after rainfall / from the (soil) surface ; <i>species 2:</i> 3 deep / long (vertically), root ; 4 to absorb, ground / deep, water (in the soil) ;