Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

Each answer shows the steps, then the **result**.

2.1

habitat: the place where an organism lives; adaptation: a feature that increases its chance of survival and reproduction in that habitat

2.2

lay a transect line from wet to dry ground; place quadrats at regular intervals, recording plant percentage cover and soil moisture at each; repeat with more transects and look for a correlation

2.3

rolled leaves / hairs trap moist air, reducing water loss; sunken stomata reduce transpiration; deep roots reach water far below the surface

2.4

any two: warm water (23–29 °C); shallow / clear water with plenty of light; salt water / correct pH

2.5

the algae (zooxanthellae) inside coral cells photosynthesize; they supply the coral with sugars / food

3.1

(a) tropical rainforest; hot all year and high rainfall in every month

(b) buttress roots support tall trees in shallow soil; drip tips shed water quickly from leaves

(c) temperature; rainfall / precipitation

3.2

(a) 14 °C

(b) it is beyond the upper limit, so it cannot survive / is absent

(c) warmer water near the edges of its range goes past its upper limit; so the fish moves towards the poles / into deeper, cooler water, or dies out locally

(d) salt glands / ultrafiltration remove salt; roots that grow upwards into the air take in oxygen

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