

## 6. Plant nutrition

### Starter Quiz · 课前小测

IGCSE Biology

Name: \_\_\_\_\_ Score: \_\_\_\_\_

1. The products of photosynthesis are:

- ☐ glucose and oxygen
- ☐ carbon dioxide and water
- ☐ starch and protein
- ☐ water and minerals

2. A leaf is broad and flat mainly to:

- ☐ have a large surface area to capture light
- ☐ store water
- ☐ protect the plant
- ☐ attract insects

3. The green pigment that absorbs light for photosynthesis is:

- ☐ chlorophyll
- ☐ glucose
- ☐ haemoglobin
- ☐ starch

4. Which leaf layer contains the most chloroplasts?

- ☐ the palisade layer
- ☐ the waxy cuticle
- ☐ the lower epidermis
- ☐ the veins

5. A limiting factor is one that:

- ☐ is in shortest supply and holds back the rate
- ☐ always speeds the reaction up
- ☐ has no effect
- ☐ is the product

6. Which does a plant need for photosynthesis? (Select all that apply.)

- ☐ light
- ☐ carbon dioxide

☐ water

☐ protein

*Tick every correct option.*

7. Guard cells open and close the stomata.

☐ True    ☐ False

8. Glucose made in photosynthesis is often stored as \_\_\_\_\_.

\_\_\_\_\_

9. A leaf is \_\_\_\_\_ so that gases can diffuse in and out over short distances.

\_\_\_\_\_

10. Stomata are pores that allow:

- ☐ gases to enter and leave the leaf
- ☐ water to be stored
- ☐ light to be absorbed
- ☐ sugar to be made

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1. **glucose and oxygen**

$\text{CO}_2$  + water  $\rightarrow$  glucose + oxygen.

2. **have a large surface area to capture light**

Large surface area maximises light capture.

3. **chlorophyll**

Chlorophyll in chloroplasts traps light energy.

4. **the palisade layer**

The palisade layer near the top absorbs the most light.

5. **is in shortest supply and holds back the rate**

The scarcest factor limits the rate.

6. **light; carbon dioxide; water**

Light,  $\text{CO}_2$  and water (plus chlorophyll) are needed; protein is not a raw material.

7. **True**

They control gas exchange and water loss.

8. **starch**

Starch is the plant's storage carbohydrate.

9. **thin**

Thinness shortens the diffusion distance.

10. **gases to enter and leave the leaf**

Stomata let  $\text{CO}_2$  in and  $\text{O}_2$  out.