A. Essay (2)

1) Explain photosynthesis: where it happens, what it needs, and what it produces. Photosynthesis happens in the green parts of plants. The plant uses light and oxygen from the air with water to make sugar. The sugar feeds the plant and carbon dioxide comes out. The leaves do this to grow taller. It is important for the plant and also for animals.
2) Compare photosynthesis and respiration in plants—how they're different, how they work together, and when they occur. Photosynthesis makes food using oxygen and respiration uses carbon dioxide. Photosynthesis is during the day and respiration is only at night. They are opposite processes that don't work together.

B. Short Answer (3)

3) What is chlorophyll and why is it important? Chlorophyll is a pigment (I think orange) that collects sunlight. It is important because without it the plant can't start photosynthesis.
4) What do stomata do, and why can opening/closing them be helpful to a plant? Stomata mostly let out carbon dioxide and stop air from entering. They close when plants want more air.
5) Where and how do plants store extra glucose, and why is that useful? Extra glucose is stored in flowers to make more petals. This helps the plant look bright.

C. One-liners (5)

6) Word equation for photosynthesis (use words, not symbols). carbon dioxide + water + light → glucose + oxygen
7) Organelle for photosynthesis. Chloroplast
8) Organelle for respiration. Vacuole
9) Gas taken in during photosynthesis. Oxygen
10) Define transpiration in 10 words or fewer. Water vapor leaving leaves.