

# Answers

REVIEW  
IT!

## Cell biology

### Review it!

- 1
  - a Undifferentiated cells; that can become any type of specialised cell.
  - b Embryos / umbilical cords; Adult organs contain a few stem cells.
  - c No rejection of cells / organs by patient; Transfer of viral infection; No waiting time for transplants; Ethical / religious objections.
- 2
  - a Osmosis is the movement of water from a dilute solution to a concentrated solution; through a partially permeable membrane.
  - b The Visking tubing will fill with water; as water moves from the distilled water into the concentrated sugar solution inside the Visking tubing.
  - c The tubing is a partially permeable membrane.
  - d Water would move into the animal cell; and the animal cell would burst.

## Tissues, organs and organ systems

### Review it!

- 1
  - a Thin and closely packed cells for maximum exposure to sunlight; Packed with chloroplasts to absorb sunlight.
  - b
    - i In wind, as the diameter of the stomata increases, the rate of transpiration increases. In still air, as the diameter of the stomata increases, up to  $5\ \mu\text{m}$ , the rate of transpiration increases; In still air after  $5\ \mu\text{m}$ , the rate of transpiration remains constant.
    - ii In wind, water diffuses out of the stomata at a faster rate; Increasing the diameter of the stomata, means that more water can diffuse out of the stomata; In still air, water diffuses out of the stomata very slowly and increasing the diameter of the stomata above  $5\ \mu\text{m}$  does not increase the rate of transpiration.