

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.