

- 1) 4    2) 2    3) 3    4) 3

5) **SAMPLE ANSWERS:** Food must be digested before it can enter a cell since... certain food molecules are too large to pass through the cell membrane. OR ...only small molecules can pass through membrane pores.

- 6) 2    7) 2    8) 1    9) 4    10) 1

11) **SAMPLE ANSWERS:** Some molecules are too large to pass through the membrane. OR Some molecules are not soluble. OR the permeability of the membrane

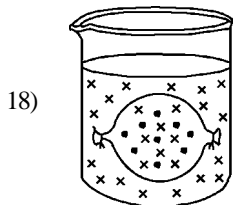
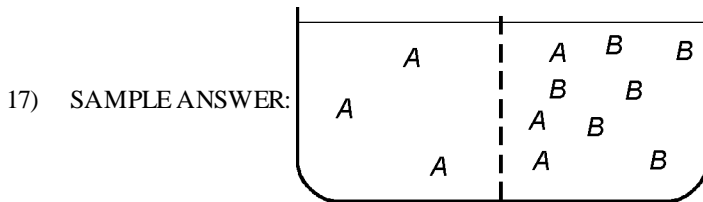
12) **SAMPLE ANSWERS:** Molecule A is larger than molecule B. OR Molecule A is too large to pass through membrane pores. OR One molecule is larger than the other. OR shape OR charge OR solubility

13) **SAMPLE ANSWERS:** molecule size OR concentration of molecules OR pore size OR carrier proteins OR molecule charge/shape

14) **SAMPLE ANSWER:** Nutrients would move (diffuse) from an area of high concentration of the nutrient to an area of low concentration of that nutrient.

15) **SAMPLE ANSWER:** Add starch indicator solution to the water in the beaker. If the indicator solution changes color, then starch is present (no color change, no starch).

16) **SAMPLE ANSWERS:** starch indicator OR iodine solution OR Lugol's solution



19) **SAMPLE ANSWERS:** A blue-black color would indicate the presence of starch. OR A color change would occur.

20)

|   |  |
|---|--|
| <b>Name of Substance C</b>                  | starch indicator<br>iodine   |
| <b>Direction of Movement of Substance C</b> | into model cell, from high to low concentration                        |
| <b>Reason for Movement of Substance C</b>   | small size of molecules,<br>differences in concentration,<br>diffusion |

21) **SAMPLE ANSWERS:**  
 (a) starch OR polysaccharide OR complex carbohydrate  
 (b) It is a large molecule. OR too big

22) **SAMPLE ANSWER:** The model cell that was placed in 100% water increased in mass because water diffused into the model cell.

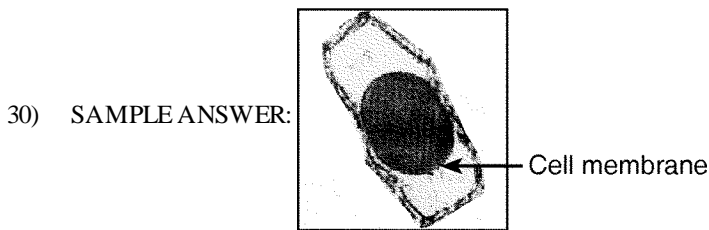
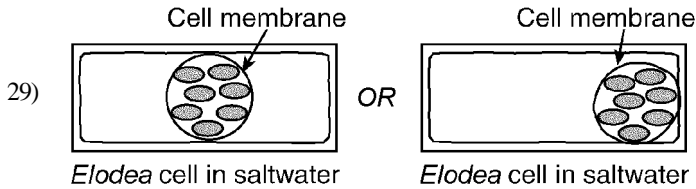
23) 80%  
**SAMPLE ANSWERS:** The model cell did not increase in mass. OR The model cell did not change. OR According to the table,

when the mass of the model cell is 10 grams, the concentration of water outside the model cell is 80%. This would be the same as the concentration of water inside the model cell.

24) SAMPLE ANSWERS: diffusion OR osmosis OR passive transport

25) SAMPLE ANSWERS: Water diffused into the cells of the potato because there was a higher concentration of water outside than inside the slice. OR The potato slice increased in water content.

26) 4      27) 3      28) 4



31) SAMPLE ANSWERS:

(a) salt solution OR salt water OR salt;

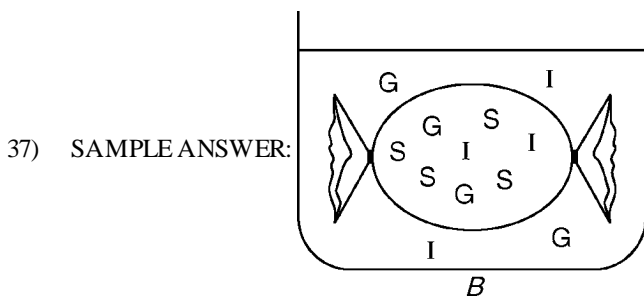
(b) Put a piece of paper towel on one edge of the coverslip and add the substance to the opposite edge of the coverslip one drop at a time. Add more drops as the paper towel soaks up the liquid from under the slide.

32) SAMPLE ANSWERS: salt solution OR sugar solution

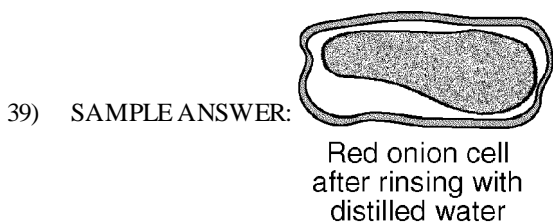
33) water

34) A drawing showing more cells shown than in the original view, each smaller in size, with shrunken contents.

35) 2      36) 2



38) SAMPLE ANSWERS: A color change OR The color changes from amber to blue black.



40) SAMPLE ANSWERS: The paper towel should be placed along one edge of the coverslip. OR Water is needed. OR The water

(liquid) should be placed along the edge of the coverslip opposite the paper towel.