

Weaknesses

There was confusion among candidates on the difference between diffusion and osmosis. Knowledge on role of active transport was lacking.

Expected Response

- a) Diffusion is the movement of molecules from a region of high concentration to a region of low concentration; until the molecules are uniformly distributed; in the medium.
- b)
 - i) Diffusion gradient
The higher the diffusion gradient between two points the faster the rate of diffusion; Accept the converse
 - ii) Surface area volume ratio
The higher the surface area volume ratio the faster the rate of diffusion; Accept the converse
 - iii) Temperature
Increasing temperature increase the rate of diffusion;
- c) - Reabsorption of glucose and some salts by the kidney
- Absorption of digested food from the alimentary canal;
- Excretion of waste products from the body cells;
- Reabsorption of useful material in the blood stream;

Question 17

During germination and growth of a cereal, the dry weight of endosperm, the embryo and the total dry weight were determined at two day intervals. The results are shown in the table below.

| Time after planting (days) | Dry weight of endosperm (mg) | Dry weight of embryo (mg) | Total dry weight (mg) |
|----------------------------|------------------------------|---------------------------|-----------------------|
| 0 | 43 | 2 | 45 |
| 2 | 40 | 2 | 42 |
| 4 | 33 | 7 | 40 |
| 6 | 20 | 17 | 37 |
| 8 | 10 | 25 | 35 |
| 10 | 6 | 33 | 39 |

- (a) Using the same axes, draw graphs of dry weight of endosperm, embryo and the total dry weight against time. (7 marks)