

- (c) Explain how a seed is formed after an ovule is fertilized. (4 marks)

Candidates were required to give differences between anther, pollen grains and stigma in wind and insect pollinated flowers and the importance of cross pollination and explain how seed is formed after an ovule is fertilized.

Weaknesses

Most of the candidates failed to march the differences. Candidates were not able to describe events after fertilization.

Expected Response

a)

Insect pollinated	Wind pollinated flower
♦ Small anthers which are firmly attached to filament;	♦ Large anthers which are loosely attached to filament;
♦ Pollen grains are large, heavy and sticky;	♦ Pollen grains are small, smooth and light;
♦ Small sticky stigmas;	♦ Long feathery stigmas which hang outside the flower;

- b) Source of variation/natural selection;
- c) Fertilized ovule (zygote) undergoes mitosis; to form embryo which has a rudimentary plumule and radicle; a cotyledon, and/or an endosperm develop; testa develops from the integuments.

Question 16

- (a) What is diffusion? (2 marks)
- (b) How do the following factors affect the rate of diffusion?
- (i) Diffusion gradient. (1 mark)
- (ii) Surface area volume ratio. (1 mark)
- (iii) Temperature. (1 mark)
- (c) Outline **three** roles of active transport in the human body. (3 marks)

Definition of diffusion and the effect on diffusion by gradient, surface area volume ratio and temperature was required.