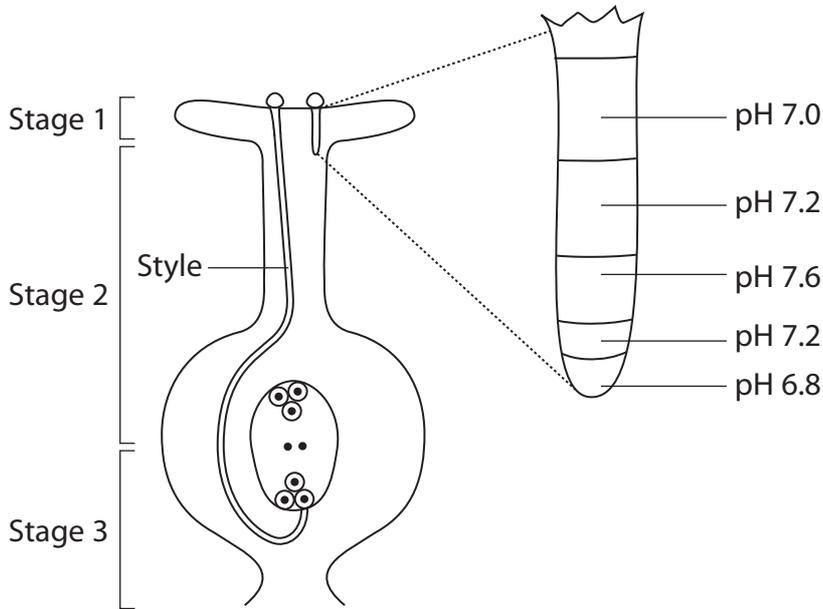


5 Sexual reproduction in plants includes the transfer and fusion of gametes.

The diagram below shows part of a flower with two pollen grains and their pollen tubes.

The diagram also shows an enlargement of one of the pollen tubes and the pH of the cytoplasm in each region of this tube.



(a) At stage 1, the pollen grain contains the haploid generative nucleus. Explain what is meant by the term **haploid nucleus**.

(2)

.....

.....

.....

.....

(b) Describe the changes in the pH of the pollen tube shown in the diagram.

(2)

.....

.....

.....

.....



(d) During stage 3, the generative nucleus divides to form two male nuclei and the pollen tube fuses with the embryo sac.

Describe what happens to each of these two male nuclei.

(2)

.....

.....

.....

.....

.....

.....

.....

(Total for Question 5 = 11 marks)

