

3 (a) Fig. 3.1 shows one stage involved in plant reproduction after pollination.

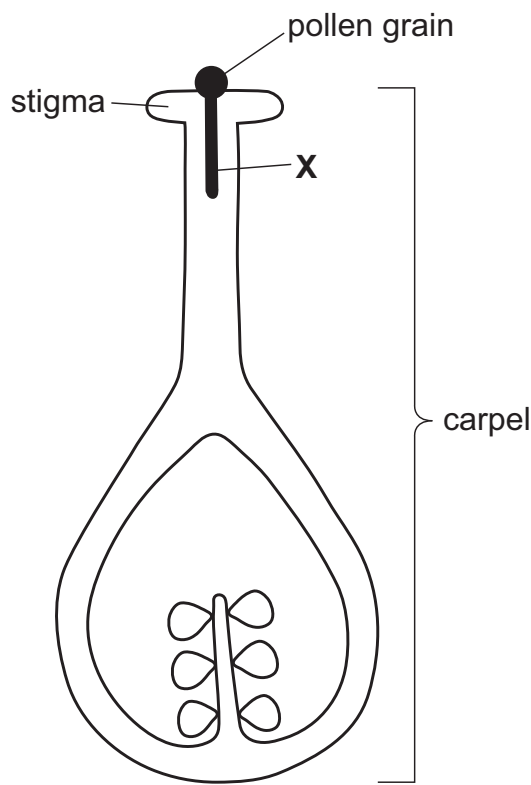


Fig. 3.1

(i) State the name of the part labelled X in Fig. 3.1.

..... [1]

(ii) Describe the events that occur after the stage shown in Fig. 3.1 that result in fertilisation.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
..... [3]

(b) A species of plant can use self-pollination and cross-pollination.

(i) Suggest reasons for this species of plant to use self-pollination rather than cross-pollination.

.....  
.....  
.....  
.....  
.....  
.....  
..... [3]

(ii) Discuss the potential effects of only using self-pollination in a population of plants.

.....  
.....  
.....  
.....  
.....  
.....  
..... [3]

(c) Meiosis produces gametes and is a source of genetic variation.

State **two other** sources of genetic variation in populations.

1 .....  
2 ..... [2]

(d) Describe mitosis and its roles in organisms.

.....  
.....  
.....  
.....  
.....  
.....  
..... [4]

(e) State the name of the unspecialised cells that divide by mitosis.

..... [1]