IGCSE BIOLOGY • EXERCISE SHEET

16.3 Sexual reproduction in plants

Name: _____ Class: _____ Date: _____ **Total: 8 marks**

Objective

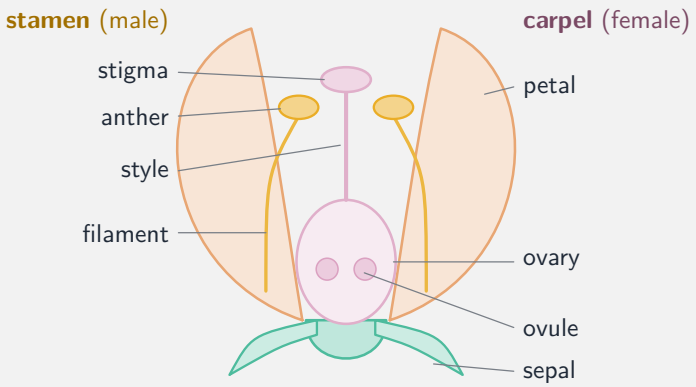
Build the skills to answer exam questions on **sexual reproduction in plants** 植物有性生殖—flower parts, **pollination** 传粉, and fertilisation/germination.

You must be able to:

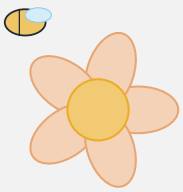
- name the flower parts and their functions
- compare insect- and wind-pollinated flowers
- describe pollination, fertilisation and the needs for germination

1 Worked examples

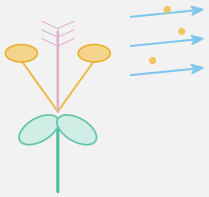
Flower and pollination



Male: stamen (anther + filament). Female: carpel (stigma, style, ovary with ovules)



insect-pollinated
bright petals, scent + nectar;
sticky, spiky pollen



wind-pollinated
small dull petals; anthers &
stigma hang out; light pollen

Insect-pollinated: bright petals, scent, nectar. Wind-pollinated: small dull petals, parts hanging out

- **germination** needs water, oxygen and a suitable temperature.

2 Practice

2.1 Name the male part of a flower. [1]

2.2 Define pollination. [1]

3 Exam-style questions

3.1 A wind-pollinated flower is likely to have: [1]

- **A** large bright petals and nectar
- **B** small dull petals and anthers hanging out
- **C** sticky pollen
- **D** strong scent

3.2 A flower is pollinated by insects.

(a) State two features that help attract insects. [2]

(b) State the three conditions a seed needs to germinate. [3]

4 Go further

You are now ready for the real exam questions on this subtopic. Open the **16.3 Sexual reproduction in plants** past-paper sheet in the Library, or try these in **Practice mode**:

- 0610/21 N25 —Q24 (plant reproduction)
- 0610/22 N25 —Q24 (pollination)

Solutions

2.1 the stamen (anther and filament).

2.2 the transfer of pollen from an anther to a stigma.

3.1 B. Wind-pollinated flowers have small dull petals and exposed anthers.

3.2 (a) any two of: bright/large petals; scent; nectar.
(b) water; oxygen; a suitable temperature.