

Q1 (1 mark)

- Stamen

Q2 (1 mark)

- Carpel / pistil

Q3 (1 mark)

- Male sex cell used for fertilisation

Q4 (1 mark)

- Anther

Q5 (1 mark)

- Ovary

Q6 (2 marks)

Any two:

- Light pollen
- Feathery stigma
- Long exposed stamens

Q7 (2 marks)

Any two:

- Bright petals
- Nectar
- Scent
- Sticky pollen

Q8 (2 marks)

Any two:

- Wind

- Animals
- Water
- Explosion

Q9 (3 marks)

- Transfer of pollen from anther to stigma (1)
- By wind or insects (1)
- Allows fertilisation (1)

Q10 (3 marks)

- Wind uses air movement to move pollen (1)
- Insects use animals to carry pollen (1)
- Different flower adaptations (1)

Q11 (3 marks)

- Pollen lands on stigma (1)
- Pollen tube grows (1)
- Fertilisation occurs when nuclei fuse (1)

Q12 (3 marks)

- Ovule becomes seed (1)
- Ovary becomes fruit (1)
- Seed contains embryo (1)

Q13 (3 marks)

- Spreads offspring away (1)
- Reduces competition (1)
- Increases survival chances (1)

Q14 (4 marks)

- Bright petals attract insects (1)
- Nectar provides food (1)
- Sticky pollen attaches to insects (1)
- Flower shape supports landing (1)

Q15 (4 marks)

- Light seeds travel further (1)
- Shape affects air resistance (1)
- Larger surface area slows fall (1)
- Heavier seeds travel less distance (1)

Q16 (4 marks)

- No pollination occurs (1)
- No fertilisation (1)
- No seeds produced (1)
- Population decreases (1)

Q17 (6 marks)

Level 1 (1-2 marks)

- Basic naming of flower parts
- Little or no function explained

Level 2 (3-4 marks)

- Some correct functions described
- Some structure included but not fully linked

Level 3 (5-6 marks)

- Clear, detailed explanation of structure and function
- Correct scientific terminology throughout

Expected content:

- Anther produces pollen (1)
- Filament supports anther (1)
- Stigma receives pollen (1)
- Style supports stigma (1)
- Ovary contains ovules (1)
- Ovules become seeds after fertilisation (1)

Example full-mark answer:

"The stamen is the male part of the flower made of the anther, which produces pollen, and the filament which supports it. The carpel is the female part and

includes the stigma, style and ovary. The stigma receives pollen and the ovary contains ovules which become seeds after fertilisation."

Q18 (6 marks)

Level 1 (1-2 marks)

- Basic statements about pollination or fertilisation

Level 2 (3-4 marks)

- Some correct stages in sequence

Level 3 (5-6 marks)

- Clear logical sequence from pollination to fertilisation and seed formation

Expected content:

- Pollen lands on stigma (1)
- Pollen tube grows (1)
- Male and female nuclei fuse (1)
- Ovule becomes seed (1)
- Ovary becomes fruit (1)
- Pollination enables fertilisation (1)

Example full-mark answer:

"Pollination occurs when pollen is transferred from anther to stigma. A pollen tube grows down the style to the ovule where fertilisation occurs when the nuclei fuse. The ovule becomes a seed and the ovary develops into a fruit."

Q19 (6 marks)

Level 1 (1-2 marks)

- Basic idea of dropping seeds or measuring distance

Level 2 (3-4 marks)

- Some method described with some control of variables

Level 3 (5–6 marks)

- Clear, valid and reliable investigation with explanation of variation between seeds

Expected content:

- Drop seeds from same height (1)
- Measure distance travelled (1)
- Repeat readings (1)
- Keep conditions constant (no wind, same height) (1)
- Shape affects air resistance (1)
- Mass affects distance travelled (1)

Example full-mark answer:

"The student at Learntit could drop different seed types from the same height and measure how far they travel in still air. The test should be repeated several times and conditions such as height and air movement should be kept constant to make it a fair test. Different seeds travel different distances because lighter seeds or those with a larger surface area experience more air resistance and stay in the air longer than heavier seeds."