KS3 SCIENCE · BIOLOGY

# Plant reproduction: exam questions

Name _____
Total: 22 marks

**1** Name the male part of a flower and the female part of a flower. **[2 marks]**

**2** State the function of (a) an anther and (b) a stigma. **[2 marks]**

**3** State what is meant by pollination. **[2 marks]**

**4** Give two differences between a typical insect-pollinated flower and a typical wind-pollinated flower. **[2 marks]**

**5** A pollen grain has landed on a stigma. Describe what happens next, up to and including fertilisation. **[3 marks]**

**6** After fertilisation, state what (a) an ovule becomes and (b) the ovary becomes. **[2 marks]**

**7** A seed contains an embryo and a food store. State the job of each. **[2 marks]**

**8** A sycamore seed has a papery wing. Suggest how the seed is dispersed, and explain how the wing helps. **[2 marks]**

**9** Explain why seed dispersal helps the parent plant and its offspring to survive. **[2 marks]**

**10** A student drops paper spinners with different wing lengths in front of a fan. She measures how far each one travels. Name (a) the independent variable, (b) the dependent variable and (c) one variable she should keep the same. **[3 marks]**

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# Plant reproduction: mark scheme

Total: 22 marks

**1** [2 marks]

- Male: stamen **(1)**
- Female: carpel **(1)**

**2** [2 marks]

- Anther: makes pollen (accept: makes the male sex cells) **(1)**
- Stigma: where pollen lands (accept: catches the pollen) **(1)**

**3** [2 marks]

- The transfer of pollen **(1)**
- From an anther to a stigma (accept: from the male part of a flower to the female part) **(1)**

**4** [2 marks]

- Petals: large and bright in an insect-pollinated flower, small and dull in a wind-pollinated flower **(1)**
- Scent and nectar: an insect-pollinated flower has them, a wind-pollinated flower does not **(1)**
- Pollen: sticky or spiky in an insect-pollinated flower, light and smooth (and much more of it) in a wind-pollinated flower **(1)**
- Anthers and stigma: inside an insect-pollinated flower, hanging outside a wind-pollinated flower (accept: feathery stigma in a wind-pollinated flower) **(1)**

Any two rows. Each difference must say something about both kinds of flower.

**5** [3 marks]

- A pollen tube grows out of the pollen grain **(1)**
- Down the style to an ovule (accept: to the ovary) **(1)**
- The male nucleus joins with the female nucleus **(1)**

**6** [2 marks]

- Ovule: a seed **(1)**
- Ovary: the fruit **(1)**

**7** [2 marks]

- Embryo: grows into the new plant **(1)**
- Food store: feeds the young plant as it starts to grow (accept: until it can make its own food by photosynthesis) **(1)**

**8** [2 marks]

- By the wind **(1)**
- The wing makes the seed fall slowly (accept: spin, or more air resistance), so the wind carries it further **(1)**

**9** [2 marks]

- There is less competition between the parent and the young plants (accept: between the young plants) **(1)**
- For light, water, space or minerals (any one named) **(1)**

**10** [3 marks]

- Independent: the wing length **(1)**
- Dependent: the distance travelled **(1)**
- Control: the height of the drop, the speed of the fan, the distance from the fan or the mass of the spinner (any one) **(1)**