1. From what does a seed develop?

**Ovule**

1. Distinguish between endospermic and non-endospermic seeds.

Endospermic seed**: a seed whose main food store is in the endosperm, e.g. sunflower;**

Non-endospermic seed**: main food store for developing embryo is in cotyledons, e.g. broad bean**

1. What is a cotyledon?

**A ‘seed leaf’, i.e. the first leaf that develops in the embryo. It is a food store**

1. Name a monocotyledon.

**e.g. Grass, maize, etc.**

1. Name a dicotyledon.

**e.g. Broad bean, peanut, pea, etc.**

1. Name a part of a flower that may develop into a fruit.

**Ovary**

1. In each of the following cases give one example of a plant that uses the stated method of seed dispersal: 1. Wind 2. animal.

Wind dispersal**: e.g. dandelion / sycamore;**

Animal dispersal**: e.g. blackberry / burdock**

1. Why is it important for plants to disperse their seeds?

**Colonise new areas / reduce competition / survival of species**

1. State one method that is used to produce seedless fruits.

**Growth regulator / selective propagation**

1. What is the role of the fruit?

**Reproduction** or **seed dispersal**

1. From what structure in the carpel does the seed develop?

**Ovule**

1. State two locations in the seed where food may be stored.

**Cotyledon / endosperm**

1. The embryo plant within the seed has a number of parts. List two of these parts, apart from food stores, and give a role for each of them.

**Radicle / plumule;**

**develops root / develops shoot**

1. Seeds and fruits need to be dispersed. Give: 1. Two methods of dispersal. 2. Two advantages of dispersal to the plant.

**Wind / animal / self (**or **mechanical) / water;**

**Colonisation / reduces competition / elaboration of competition**

1. Name a part of the flower from which fruit forms.

**Ovary / Carpel**

1. Give three examples of the ways in which fruits are involved in seed dispersal.

**Animal dispersal / Winged / Wind / Self dispersal / Water Dispersal / Human dispersal /** or **examples**

1. Suggest why it is necessary for a plant to disperse its seeds.

**To avoid competition / colonisation**

1. State one way in which it is possible to produce seedless fruits in horticulture.

**e.g. (Growth) regulators**

1. Which part of the embryo in a germinating seed gives rise to each of the following parts of the seedling? 1. The root 2. The shoot.

**1. Radicle; 2. Plumule**

1. Each seed is made up of an embryo, a food store and a seed coat (testa). One function of fruit is to aid dispersal. Explain each of the underlined terms.

Embryo**: (part of seed that) becomes the new plant;**

Dispersal**: spreading of seeds**

1. By which method are the seeds of each of the following fruits dispersed? Blackberries, Sycamore fruit.

Blackberries**: Animals;**

Sycamore fruit**: Wind: Wind**

1. After fertilisation, what part of the flower becomes the fruit?

**Ovary**

1. Many seedless fruits, e.g. grapes, are available in shops today. State one way of forming seedless fruits.

**Genetic engineering / growth regulators / hormones / selective breeding**

1. As the seed forms following fertilisation, a food store develops in one of two structures. Name any one of these structures.

**Endosperm** or **cotyledon (**or **seed leaf** or **embryonic leaf)**

1. After fertilisation, what part of the flower becomes the fruit?

**Ovary**

1. Give two methods of seed dispersal in plants.

**Wind / Animal / Self**

1. Why is it necessary for plants to disperse their seeds?

**To avoid competition** or **to avail of suitable conditions**