

Example of essay on flowering plant reproduction

[Environment](#), [Animals](#)



Question 1: If flowers give rise to fruits then what are the functions of showy flowers? If flowers are not showy, than how do they accomplish what a showy flower accomplishes?

Showy flowers function to attract to attract pollinators. According to Thornhill and Gangestad (89), showy flowers are specialized structures (selected male adaptations) that increase the male mating success by attracting the pollinators. Non-showy flowers rely on different mechanisms for pollination such as wind.

Question 2: Why are the cotyledons in the bean seedling somewhat shriveled up and not as fleshy as they were in the seed?

In beans, the food storage during development of the seed occurs in the cotyledons resulting to its enlargement. However, as the seed matures, the food stored in the cotyledons is used up resulting to the shrinkage of the cotyledons (Roberts, Reiss and Monger 535).

Question 3: Progressing from bean seed to seedling, what did the epicotyls become? What did the hypocotyls become? What did the radical become? The epicotyls in a bean eventually develops into a leaf the hypocotyls develop into stems while the radicles develop into roots.

Question 4: Compare and contrast the bean corn seedlings?

Bean seedlings are Dicots while corn seedlings are Monocots. This implies that beans have two cotyledons while corns have one cotyledon. In beans, food storage occurs in the cotyledon while the seedling develops while in corn food storage occurs in the endosperm. Both the bean and the corn seedlings have an epicotyl, radicle, and a hypocotyl.

Question 5: Discuss how interactions between plants and animals have contributed to the adaptive radiation of angiosperms

Angiosperms being flowering plants produce ovaries that develop into a fruit. The fruit acts as an attractor to many insects and animals that feed on it contributing to its dispersal. Various characteristics of the fruit such as color and fragrance attract different animals (Starr, Evers, and Starr 344). The result of such an interaction is the development of diverse plant species.

Question 6

Matching

- _h_ Complete flower a. inferior ovary
d perfect flower b. lowermost portion of hypocotyls
a petals& sepals attached to stalk above ovary c. seed leaf
e testa d. both stamen and pistil present
c cotyledon e. seed coat
b radical f. nutrient tissue in seed
f endosperm g. developed from several flowers
g multiple fruit h. all four whorls present

Question 7: Is corn a monocot or a dicot?

A corn is a monocot.

Question 8: What are the three major components of the pistil?

The three major components of a pistil include the stigma style and the ovary.

Question 9: What are the two major components of the stamen?

The major components of the stamen are the anthers and the filament.

Question 10: What is the difference between a simple and an aggregate fruit?

According to Berg and Berg (196), a simple fruit develops from a single ovary whereas an aggregate fruit develops from a single flower with many separate ovaries.

Question 11: List the three plant tissue types, and give the function of each

- Vascular tissues: these include the xylem and the phloem tissues. The xylem tissue is responsible for transporting water and minerals while the phloem transports food.
- Dermal tissue: this tissue forms the outer covering of the plants.
- Ground tissue: includes the parenchyma cells (responsible for photosynthesis and tissue repair), collenchymas cells, and the sclerenchyma cells both which contribute to structural support (Starr, Evers, and Starr 550).

Question 12: What is the function of each of the following?

- Cuticle: is a waxy layer found on the outer walls of the epidermis to limit water loss from the surface.
- Guard cells: these cells control the opening and closing of the plant stomata.
- Mesophyll: acts a site where photosynthesis takes place.
- Veins: holds the vascular tissues, xylem, and the phloem (Berg and Berg 156).

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