



Unit 5 • Life Process: seeds, their dispersal and germination

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 38

1 Key words

[4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

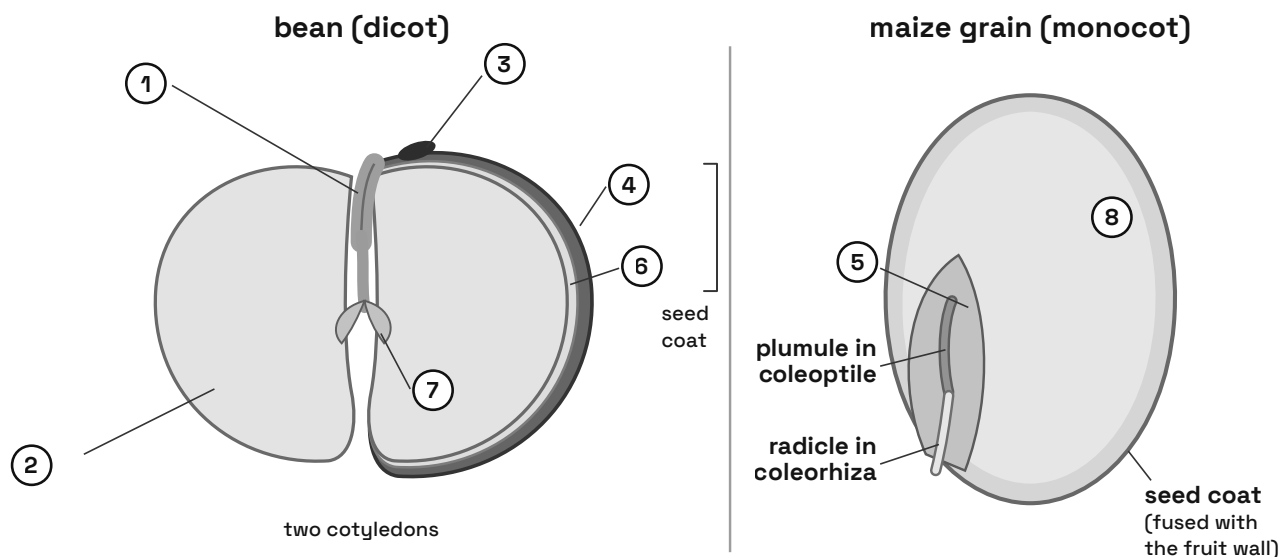
dispersal dormancy epigeal germination hilum hypogeal micropyle ovule plumule
seedling

A seed is a fertilized, ripened _____ with an embryo inside. The carrying of seeds from the parent plant to other places is called _____ of seeds. When a seed is soaked, water enters through a tiny hole in its coat, the _____. A ripe, dry seed stays alive without growing; this resting state is called _____. The growth of the embryo into a young plant with its own root and shoot is called _____. In a bean the cotyledons come above the ground, so its germination is _____; in maize the cotyledon stays under the soil, so its germination is _____. The young plant that grows from a germinated seed is a _____.

2 Label the diagram

[4]

The diagram shows a bean seed opened out (left) and a maize grain cut lengthwise (right). Write the names of the parts numbered 1 to 8. Each carries 0.5 mark.



1. _____
3. _____
5. _____
7. _____

2. _____
4. _____
6. _____
8. _____



[5]

Choose the correct option for each of the following questions.

- i. How are the seeds of thatch grass (khar) dispersed? [1]
 - a. by air (wind)
 - b. by water
 - c. by bursting pods
 - d. by birds
- ii. What is the main function of a seed? [1]
 - a. to form the fruit
 - b. to produce a new plant
 - c. to keep the plant's kind going
 - d. to store nutrients
- iii. Which of these happens during germination? [1]
 - a. the plumule and radicle become active and make the cotyledons
 - b. the endosperm becomes the root system
 - c. the stem grows from the seed coat
 - d. the cotyledons (in a seed like the bean) come up and become the first green leaves
- iv. Why are seeds not stored in damp or wet places? [1]
 - a. to keep them warm
 - b. so that they absorb less air
 - c. because moisture would start germination and let molds rot them
 - d. to keep them heavier
- v. Which statement about dormancy is correct? [1]
 - a. it keeps the seed alive and able to germinate later
 - b. it adds nutrients to the seed
 - c. it protects the seed from air and water
 - d. it carries out the chemical reactions of germination

[3]

Write very short answers to the following questions.

- a. Which part of the embryo comes out of a seed first when it germinates? [1]
-
-
- b. Name any two plants whose seeds or fruits are dispersed by water. [1]
-
-
- c. White rice is almost all endosperm. Why? [1]



5 Short answers

[8]

Write short answers to the following questions.

- a. Give a reason: seeds start to germinate when soaked in water.

[2]

- b. Give a reason: seeds of red silk cotton (simal) are dispersed over long distances.

[2]

- c. Write any two differences between the plumule and the radicle.

[2]

- d. What is the role of air in germination?

[2]

6 Long answers

[8]

Write long answers to the following questions.

- a. Explain how a bean seed germinates.

[4]

- b. Suryanarayan plowed his field well and added compost to sow wheat. He sowed the wheat and plowed the field again, which buried all the seeds. A few days later, the seedlings were good where the soil was moist, but in the dry part of the field germination was patchy.

[4]

- Why did he plow the field again after sowing? (1)
- Why did the seeds in the dry part not germinate well? (1)
- What should he do to get good seedlings in every corner of the field? (2)



7 Numerical problems

Solve the following problems. Show your working.

- [2]

Answer:

- [2]

Answer:

8 Think

[2]

Think, then answer.

In Activity 5.13, three seeds are tied to a strip in a beaker half full of water. The seed at the bottom is under water and has plenty of water, but it doesn't germinate. Why?

9 Activity: Watch seeds germinate (Activity 5.12)

(not marked)

Soak some mustard seeds for a day, spread them on wet cotton in a dish, keep the cotton wet, and fill in the table each day.

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