



Unit 5 • Life Process: asexual reproduction and vegetative propagation

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 37

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.

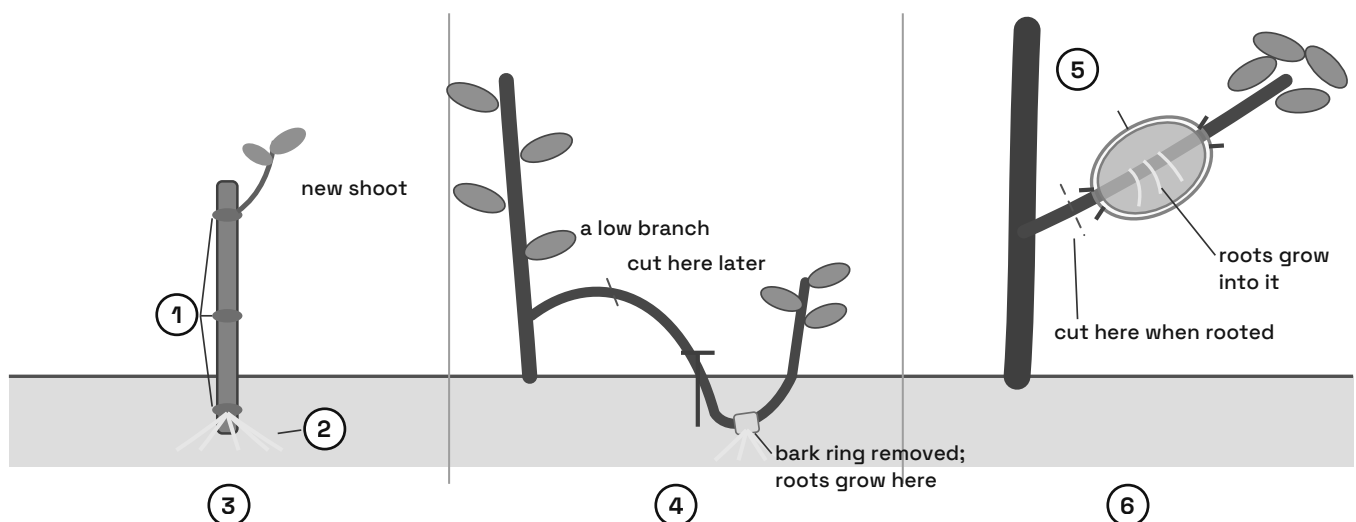
asexual reproduction binary fission budding fragmentation parthenogenesis
regeneration rhizome scion spores stock

Reproduction by one parent alone, without the fusion of gametes, is called _____. In _____, a full-grown cell splits into two halves. Yeast and hydra reproduce by _____. A small outgrowth grows on the parent and breaks off. A planarian cut into pieces grows each piece into a whole worm; this is _____. Ferns and mushrooms reproduce by tiny single-celled units with a tough coat, called _____. Drone bees hatch from the queen's unfertilized eggs, by _____. Ginger and turmeric grow from a thick stem lying flat just under the soil, a _____. In grafting, the twig with buds taken from a good fruit tree is called the _____.

2 Label the diagram

[3]

The diagram shows three ways of growing roots on a piece of a plant. Write the names of the parts and methods numbered 1 to 6. Each carries 0.5 mark.



- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |



3 Multiple choice

[5]

Choose the correct option for each of the following questions.

- i. Which of these best gives the meaning of reproduction? [1]
- a. the cycle of birth and death
 - b. giving birth to young ones once grown up
 - c. the biological process of producing new individuals of one's own kind
 - d. forming seeds, laying eggs and giving birth
- ii. How are new organisms formed in regeneration? [1]
- a. a new life grows from a freshly broken piece of the parent
 - b. a broken-off part rebuilds its missing parts and becomes a whole body
 - c. the broken piece breaks up again
 - d. the piece develops straight into a body without growing anything new
- iii. A single Paramecium splits into two. How are the two new cells related to the parent? [1]
- a. each has half of the parent's genes
 - b. both are copies of the parent, with the same genes
 - c. one is the parent and the other is its baby
 - d. they mix genes from two parents
- iv. An old potato has new shoots and leaves growing from its eyes. Which type of vegetative propagation is this? [1]
- a. tuber
 - b. rhizome
 - c. bulbils
 - d. corm
- v. Farmers plant pieces of sugarcane stem, not seeds. What must each piece have? [1]
- a. a leaf
 - b. a flower
 - c. at least one node, with its bud
 - d. a piece of root

4 Very short answers

[3]

Write very short answers to the following questions.

- a. What are the capsules in which spores are made called? [1]
-
-
- b. Name a plant whose leaf grows tiny new plants from the notches along its edge. [1]
-
-
- c. A sweet potato and a potato are both swollen and full of starch. Which of them is a stem? [1]
-
-



5 Short answers

[8]

Write short answers to the following questions.

- a. Give a reason: asexual reproduction has no male and female.

[2]

- b. Give a reason: farmers benefit from grafting.

[2]

- c. Write any two differences between fission and budding.

[2]

- d. What kind of reproductive unit is a bulbil? Give an example.

[2]

6 Long answers

[8]

Write long answers to the following questions.

- a. What are the stock and the scion in grafting? Describe grafting and write its advantages.

[4]

- b. What is tissue culture? Describe how plantlets are grown by it, and write one advantage of the method.

[4]



[4]

Solve the following problems. Show your working.

[2]

Answer:

[2]

Answer:

[2]

Think, then answer.

A lizard that drops its tail grows a new tail. Is this reproduction? Give a reason.

(not marked)

Plant a few pieces of a year-old rose stem, each about 20 cm long with at least two nodes, with one node in moist soil. Watch them for 15 days and fill in the table.

Day	Buds above the soil	Leaves	Anything else you notice
1			
5			
10			
15 (pull one up gently: roots?)			

