**Questions with Answers for junior tests**

**Topics**

Animal Digestion

Beef Farming

Dairy Farming

Pasture

Pig farming

Primary Industry

Plant Production

**Plant Propagation**

Plant Structure

Plant propagation

Sheep Farming

Soil Science

If you are planning an assessment for your junior classes here are some questions you can select from and adapt to develop an assessment to suit your class. Most questions a scaffolded with easy simple questions to ones that require more thought and detailed answers.

**What you need to do?**

Select relevant questions.

Add lines or develop an answer sheet so the test can be used multiple times

Allocate marks

The answers are provided for each question.

**Plant Propagation**

**Question One:** Plant Propagation

Plants can be propagated by sexual and asexual reproduction as shown in the diagram.

1. Describe two ways in which sexual and asexual propagation are different.

Diagram of a plant with a flower and leaves

AI-generated content may be incorrect.

**Question Two:** Seeds and Germination

A diagram of a fertilization

AI-generated content may be incorrect.

1. Using the labels name the parts of the bean seed A-D.

**A**

**Seed leaves**

**Cotyledon,**

**Testa**

**Embryo**

**B**

**C**

1. Describe the function of the testa.

**D**

**A diagram of different types of cotton wool

AI-generated content may be incorrect.**The following experiment has been set up to show which factors are necessary for germination. Seeds will germinate quickly in two of the pots.

1. Name **three** environmental factors that are needed for seeds to germination.
2. For each factor, explain why it is needed for germination.

**Question Three:** Dormancy

Some seeds go through a period of dormancy before they germinate.

1. Explain what dormancy is and why some seeds have a period of dormancy.



Dormancy in some seeds can be broken by

scarification (chipping).

1. Describe what scarification does to the seed.
2. On the diagram indicate **WHERE** you would scarify this seed

before sowing.

**Question Four**: Terminology

These terms were found in a planting guide. Describe the meaning of each term.

1. Dormancy.
2. Transplanting
3. Pricking out
4. Thinning out.
5. Hardening off.
6. Damping off

**Question Five:** Asexual reproduction

The diagrams below show methods of asexual reproduction.

1. Match diagrams **A-E** with the name of the propagation methods given in the box.



#### Leaf section cutting, Division, Deciduous hardwood cutting, Leaf offset Petiole cutting

1. Describe two advantages of growing plants by asexual reproduction.

# **Question Six:** Stem Cuttings

# The diagram below is a softwood Cutting.

A drawing of a tree

AI-generated content may be incorrect.

1. Describe **two** advantages of growing plants from cuttings.
2. Outline a common problem when you grow plants from cuttings.
3. Explain why you should pull the leaves off the lower part of a cutting?
4. Describe **two** conditions required to grow cuttings successfully and explain why they are needed.

**Answers**

**Question One:** Plant Propagation

1. Sexual reproduction: - produces seeds/need two parents/ slow to mature/genetically different

Asexual reproduction: - production of new plants from other parts of the parent plant/ only one parent/ genetically identical to parent plant/ quick to mature

**Question Two:** Germination

1. Parts of the seed

A-Testa

B- Embryo

C- Seed leaves

D- Cotyledon

1. Function of the testa

Answers include

* The testa is the seed coat, its main function is to protect the embryo.
* Prevents the seed from drying out during dormancy
* Prevents water getting into the seed during dormancy.

1. Name **three** environmental factors that are needed for seed germination.

WOW- Water, oxygen, warmth

1. For each factor, explain why it is needed for germination.

**Factor:** Moisture/water

Explanation: water makes seed swell so the testa/seedcoat splits and starts chemical reactions in the seed which make the root and shoot grow

**Factor:** Temperature

Warm/specific temperatures are required for chemical reactions to occur so the seed germinate

**Factor:** Oxygen

Oxygen is needed for the seed respiration to produce energy for the seed to germinate/shoot and root to grow

**Question Three:** Dormancy

Some seeds go through a period of dormancy before they germinate.

1. Explain what dormancy is and why some seeds have a period of dormancy.

Dormancy: Resting stage, the seed is alive but will not germinate

Explanation: To prevent seeds from germinating in unfavourable environmental conditions

Dormancy in some seeds can be broken by scarification (chipping).



1. Describe what scarification does to the seed.

* Scarification breaks the testa
* Seed coat is broken allowing water to enter

1. Away from the embryo

**Question Four**: Terminology

These terms were found in a planting guide. Describe the meaning of each term.

1. Dormancy.
2. Transplanting
3. Pricking out
4. Thinning out.
5. Hardening off.
6. Damping off

**Question Five:** Asexual reproduction

(a)

A: Divisions

B: Petiole cutting

C: Leaf section

D: Leaf offsets

E: Deciduous hardwood cuttings

1. Answers include

Plants grown by asexual reproduction

* are genetically identical to the parent plant so are all the same.
* Mature quickly
* Can produce lots of new plants from one parent plant

# **Question Six:** Stem Cuttings

1. Describe **two** advantages of growing plants from cuttings.

Answer-

Identical to parent plant

Mature quickly

1. Outline a common problem when you grow plants from cuttings.

Answer- Transfer of disease from parent plant to new plant

1. Explain why you should pull the leaves off the lower part of a cutting?

Answer-To reduce transpiration/water loss from the cuttings. As cutting has no roots it will not take up much water. If cuttings loose to much water it will not form roots and die

1. Describe **two** conditions required to grow cuttings successfully and explain why they are needed.

Bottom heat: stimulates the cambium cells to divide quickly and produce new roots

Rooting hormone powder: increases the amount of hormones increasing cell division and root formation

High humidity**:** prevents water loss encouraging cell division and root formation