

**National University of Lesotho**  
**Faculty of Agriculture**  
**BSc Crop Science**  
**CPS 2503: Introductory Crop Botany**

**Date: August 2023**                      **Supplementary Examinations**                      **Total time 3hrs**

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**Total Marks: 100**

**Instructions to candidate**

- a) Answer **ALL FOUR** Questions.
- b) Each Question Carries **25 Marks**.

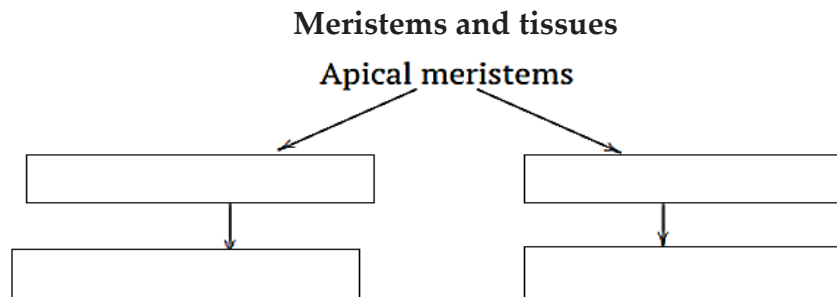
-----GOODLUCK!!-----

### QUESTION 1 (25 Marks)

1.1. Pick any Crop grown in Lesotho, using its **Botanical/taxonomical classification**, show its **family name**, **systematic position**, and **Botanical description**. [25]

### QUESTION 2 ((25 Marks)

2.1 The diagram below shows the **apical meristems** and **Tissues Evolution**. Fill in the diagram the correct lineage of meristematic cells and tissues. [8]



2.2 Explain how cotyledon development replaces endosperm in eudicots seeds [5]

2.3. **Write botanical name** and **part used** of these three crops below:

(i) Tomato [4]

(ii) Garlic [4]

(iii) Peach [4]

### QUESTION 3 (25 Marks)

3.1. a) With the help of suitable illustrations, give the differences between a monocot leaf and a dicot leaf. [10]

(b) Explain fertilization in angiosperms [5]

3.2. Roots are important on our diet, **list any roots** that you have used during the month of May. **What qualities of the roots made them useful?** [10]

#### QUESTION 4 (25 Marks)

##### **(a) Fill in the blanks:**

- (i) Germination is the resumption of metabolic activities by the seed tissues, and it involves ..... [4]
- (ii) .....is a symbiotic nitrogen fixing bacterium [2]
- (iii)...is one of the most important algal substances produced by the red algae [2]
- (iv) O<sub>2</sub> release during plant photosynthesis comes from..... [2]

##### **(b) Match the terms given in column A with those in column B:**

###### **Column A**

###### **Column B**

- |                      |           |     |
|----------------------|-----------|-----|
| (i) Tuber            | Algae     | [2] |
| (ii) Dianoflagelates | Potato    | [2] |
| (iii) Modified stem  | cabbage   | [2] |
| (iv) Legume          | Kanamycin | [2] |
| (v) Antibiotics      | pea       | [2] |

##### **(c) Which of the following statements are True or False?**

- (i) Vascular bundles in monocot stem are arranged in a ring..... [2]
- (ii) Coleoptile protects the apical meristems during seed germination.....[2]
- (iii) Cabbage is not an example a modified stem .....[1]