

**NATIONAL UNIVERSITY OF LESOTHO**

**B.Sc. (AGRIC) CROP SCIENCE EXAMINATION**

**CPS 2512: PRINCIPLES AND PRACTICES OF CROP PRODUCTION**

**MAY 2023**

**MARKS: 100**

**TIME: 3 HOURS**

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**INSTRUCTIONS: ANSWER ALL FIVE QUESTIONS.**

**EACH QUESTION CARRIES 20 MARKS**

**COMMENCE EACH ANSWER ON A NEW SHEET**

**Question 1: Define the following terms: (20)**

1. Tillage (2)
2. Stratification (2)
3. Photoperiodism (2)
4. Water requirement of a crop (2)
5. Seed pelleting (2)
6. Economic injury level (2)
7. Drainage (2)
8. Weed eradication (2)
9. Live mulch (2)
10. Nonselective herbicides (2)

**Question 2: Briefly discuss (20 marks)**

1. Criteria used to classify herbicides (3)
2. The sources of plant nutrients (3)
3. The criteria that an element must meet to be referred to as essential element (3)
4. The conditions necessary for seed germination. (3)
5. The concept of Disease Triangle (3)
6. Five purposes of tillage (5)

**Question 3: Distinguish between the following (20)**

1. Macro and micro nutrients (4)
2. Farm yard manure and compost manure (4)
3. Epigeal and hypogeal types of germination. (2)
4. Primary and Secondary dormancy (2)
5. Germination and emergence (2)
6. Obligate and Facultative parasite (2)
7. Common and Noxious weeds (2)
8. Continuous cropping and Shifting cultivation (2)

**Question 4**

1. State five centres of crop origin and for each centre mention one crop that originated from there (5)
2. State five agronomic classification of field crops with example of a crop for each classification (5)
3. State the principles of weed control (5)
4. State five characteristic of weeds which make them excellent competitors with the crop plants (5)

**Question 5**

1. Discuss any five plant structural differences between monocotyledons and dicotyledons and (10)
2. Draw a three-year crop rotation with any of the following crops: maize, beans, potatoes, sorghum and wheat for a farmer who divides his entire field into several plots (6)
3. State the effects of Delayed harvesting of crops (4)