

**NATIONAL UNIVERSITY OF LESOTHO**

**FACULTY OF AGRICULTURE**

**CPS 4502 – 3: POMOLOGY**

**January 2024**

**Marks: 100 Marks**

**Time: 3 hours**

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**Instructions: Section A is compulsory**

**Section B: Answer ONLY FOUR questions**

**Each question carries equal marks of 20**

**Section A:** each contains 2 marks

a) Describe the following terms as used in pomology and give examples where possible

- i. Temperate fruits
- ii. Precocity
- iii. Tree training
- iv. Water sprouts
- v. Apomixis
- vi. Mound layering
- vii. Stigmatic receptivity
- viii. Horticultural maturity
- ix. Fruit ripening
- x. Fruit thinning

**Section B**

Question 1

Describe the factors to consider when selecting a site for orchard establishment (20 marks)

Question 2

Compare and contrast between the following

- a) sexual and vegetative propagation in fruit crops (10 marks)
- b) traditional and high density planting systems (10 marks)

Question 3

- a) Discuss the factors to consider when selecting a rootstock for peach orchard (12 marks)
- b) Discuss the following types of soil management practices/systems
  - i. Sod culture and sod mulch (4 marks)
  - ii. Intercropping (4 marks)

Question 4

Sexually propagated fruit trees require the process of pollination as a stimulant for the release of hormones such as gibberellic acids from the pollen which in turn promotes fruit set. Discuss in details the process of pollination and the factors that affects cross pollination in fruits (20 marks)

Question 5

Clearly discuss the mechanism of bud dormancy in temperate fruits (20 marks)