



Institute of Cape Wine Masters

DISCOVERING WINE

CAPE WINE MASTER EXAMINATION THEORY: VITICULTURE

31 October 2023

Total marks: 250

Time: 3 hours

CWM Registration number:

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INSTRUCTIONS TO CANDIDATES:

- Write your CWM registration number on every page of your answer book.
 - Read the questions carefully and answer only what is asked.
 - Answer five questions of 50 marks each.
 - Question 1, 2, 3 and 4 is **COMPULSORY** (SECTION A)
 - Question 5 **OR** Question 6 is optional (SECTION B)
 - You may write in English or Afrikaans
 - The length of an answer should be in proportion to the number of marks available.
 - You may answer in point form, if you wish, and present answers in table format where appropriate.
 - Examinations must be written in PEN and not pencil.
 - Illegibly written answers cannot be marked.
 - Note: no one may leave the room within the first half hour, or the last half hour.
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SECTION A

QUESTION 1 (COMPULSORY)

“Grapevines are adapted to a vast number of soil types”. Answer the questions below based on the statement:

- 1.1 What are the characteristics of an ideal soil for viticulture? (8)
- 1.2 Define pH and state the optimum pH for grapevine functioning. (7)
- 1.3 List and discuss the macro and micro-nutrients required for vineyard functioning. (30)
- 1.4 Discuss the role of pH on the availability of nutrients. (5)

[Total marks:50]

QUESTION 2 (COMPULSORY)

2.1 Define the following terms:

- 2.1.1 Marginal climate
- 2.1.2 Macro-climate
- 2.1.3 Meso-climate
- 2.1.4 Micro-climate (12)

2.2 Discuss the temperature thresholds which influences grapevine functioning. (12)

2.3 Discuss the impact of climate on early ripening varieties and the impact on quality (local and international examples from different continents should be part of the answer). (26)

[Total marks:50]

QUESTION 3 (COMPULSORY)

3.1 List the groups of diseases that grapevines are susceptible to. (8)

3.2 Discuss one diseases in each of the groups (in Question 3.1) and discuss the lifecycle and role of climate. (30)

3.3 Discuss four (4) main pests found in South African vineyards. (12)

[Total marks:50]

QUESTION 4 (COMPULSORY)

4.1 Define the following terms:

- 4.1.1 Organic viticulture
- 4.1.2 Biodynamic viticulture (10)

4.2 Discuss the differences and similarities between organic and biodynamic viticulture. (20)

4.3 Discuss the present role of hybrids in viticulture locally and internationally. (20)

[Total marks:50]

SECTION B

QUESTION 5 (Optional)

5.1 Discuss the practices which should be followed when establishing a vineyard. (15)

5.2 Define the following terms:

5.2.1 Pruning

5.2.2 Suckering

5.2.3 Tipping

5.2.4 Topping

5.2.5 Green harvesting

(15)

5.3 What is the importance of pruning and why is it done? (10)

5.4 What is véraison and what are the implications of it on fruit quality? (10)

[Total marks:50]

QUESTION 6 (Optional)

6.1 List the function of cover crops in vineyards. (15)

6.2 What are the classes of cover crops available for grape producers. (5)

6.3 List five (5) types of rootstocks available for grape producers. (15)

6.4. What is the purpose of trellis systems? (15)

[Total marks:50]

Total marks:250