NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES
SCHOOL OF AGRICULTURE AND NATURAL RESOURCES SCIENCES
DEPARTMENT OF AGRICULTURAL SCIENCES AND AGRIBUSINESS

QUALIFICATIONS: BACHELOR OF SCIENCE IN HORTICULTURE	
QUALIFICATIONS CODE: 07BHOR	**LEVEL: 7**
COURSE CODE: CPN610S	**COURSE NAME:** CROP PRODUCTION
DATE: JULY 2025	**PAPER:** 1
DURATION: 3 HOURS	**MARKS:** 100

SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER	
EXAMINER:	DR. VENAUNE HEPUTE
MODERATOR:	MR. CLIFFORD AKASHAMBATWA

INSTRUCTIONS

1. Answer all the questions.
2. Write neatly and clearly.
3. Mark all answers clearly with their respective question numbers.
4. All written work MUST be done in blue or black ink.
5. No books, notes and other additional aids are allowed.

PERMISSIBLE MATERIALS

1. Calculator
2. Examination paper
3. Examination script

THIS QUESTION PAPER CONSISTS OF 4 PAGES
(Excluding This Front Page)

SECTION A: MULTIPLE CHOICE AND TRUE / FALSE [MARKS]

QUESTION 1: MULTIPLE CHOICE QUESTIONS [10 MARKS]

Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Fill in the appropriate letter next to the number of the correct statement/phrase on your ANSWER SHEET. *[10 marks]*

1.

1.1. Seed consist of the following parts

a) The embryo, the endosperm, and the seed coat
b) The endosperm, leaves, roots and the seed coat
c) Leaves, roots and, stem the seed coat
d) None of the above

1.2. Cucurbitacea crop botanical classification family EXCLUDE

a. Muskmelon
b. Cantaloupe
c. Broccoli
d. Butternut squash

1.3. Apiaceae family INCLUDE the following crops

a. Celery, carrot, turnip, parsley
b. Onions, garlic & asparagus
c. Maize, wheat & rice
d. Cowpea, groundnuts, soybean

1.4. Solanaceae family EXCLUDE the following crops

a. Cabbage, lettuce & cauliflower, wheat & rice
b. Potato, sweet pepper & tomato
c. All of the above
d. None of the above

1.5. Leguminosae family INCLUDE the following crops

a. Carrot, onion, garlic,
b. Cabbage, lettuce & cauliflower
c. Potato, sweet pepper & tomato
d. None of the above

1.6. G.A.P stand for

a. Geographical Information System in Production
b. Good Opportunities in Production
c. Good Agricultural Practices
d. All of the above

1.7. Climate change adaptation strategies INCLUDE

a) Developing early warning systems for extreme weather events
b) Increasing chemical fertilizer application
c) Increasing tillage and cultivation practices
d) Maximum harvesting of crops to increase yield

1.8. Seed treatment types INCLUDE

a) Fungicides
b) Insecticides
c) Nematicides
d) All the above

1.9. The main goals of seed bed preparation is to attain

a) Well aerated soil
b) Good drainage
c) Fine tilth
d) All the above

1.10. Soil structure arrangements shapes INCLUDE

a) Crumb, platy, blocky, prismatic and columnar
b) Gravel, platy, blocky, prismatic and columnar
c) Sand, platy, blocky, prismatic and columnar
d) Texture, crumb, platy, blocky, prismatic and columnar

QUESTION 2: TRUE/FALSE QUESTIONS **[10 MARKS]**

Evaluate the statements and select whether the statement is true or false. Write the word 'True' or 'False' next to the corresponding number on your ANSWER SHEET. *[10 marks]*

2. **True or False**

2.1. *Citrus senensis* is the scientific name of wheat
2.2. Plant anatomy is the study of the internal structure of plants
2.3. Rainfed is the production of crops under direct rainfall of which the production mainly relies on rainwater for crop' growth.
2.4. Banana is one of the crops from *Leguminosae* family
2.5. *Triticum aestivum* is the scientific name of tomato crop
2.6. *Cruciferea* is the growing and study of fruits
2.7. *Climate change* is a short-term change in the average weather patterns that define Earth's local, regional and global climates.
2.8. *A Impact sprinklers* is not an a example of sprinkler irrigation system.
2.9. *Soil water infiltration* is the process where water on the surface seeps into the soil
2.10. *Gravitational water* drains away out of macro-pores after irrigation or rain

SECTION B: SHORT/LONG ANSWER QUESTIONS [MARKS]

Please answer ALL the questions in this section.

QUESTION 3: TERMINOLOGIES [20 MARKS]

3. **Explicitly discuss the following terminologies**

3.1.	Smart Agriculture	{4}
3.2.	Nusery	{4}
3.3.	Soil water tension	{4}
3.4.	Seed treatment	{4}
3.5.	Bulk Density	{2}
3.6.	Viticulture	{2}

QUESTION 4: QGIS [20 MARKS]

4. **Show your understanding on the below concepts**

4.1.	What is QGIS	{5}
4.2.	Briefly discuss the procedure implementation and operation of QGIS into crop production system	{5}
4.3.	Explicitly discuss the benefits (advantages) of QGIS on crop management and production	{5}
4.4.	Explicitly discuss the challenges (disadvantages) of QGIS on crop management and production	{5}

QUESTION 5: Crop production standards and trade policies [20 MARKS]

5. **Show your understanding on the below concepts**

5.1.	What is local G.A.P	{5}
5.2.	Namibian crop producers and traders are required to adhere to trade and crop production standards/plocies. Name and briefly discuss three (3) trade and crop production standards/policy of your choice	{5}
5.3.	Briefly discuss the importance of producers and traders compliance to G.A.P, crop production and safety standards	{5}
5.4.	Explicitly discuss the challenges (disadvantages) faced by small-holder farmers on adoption and compliance to local G.A.P and international trade and crop production standards	{5}

QUESTION 6: HORTICULTURAL CROPS CLIMATIC AND SOIL REQUIREMENTS [20 MARKS]

6. **Define the climatic and soil requirements of the following crops.**

6.1.	Define the soil, nutrients and climate requirements of cabbage, letuce, grape and onion	{12}
6.2.	Calculate Bulk Density. The core is 600 cubic cm that weighs 750 grams	{3}

6.3. Fertilizer Calculation. Determine (kg) quantity amount of N, P and K in the proportion of 3:2:2(22) compound fertilizer of 100 kg bag total quantity? {5}

END OF QUESTION PAPER