



PAMIBIA 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

QUALIFICATION: BACHELOR OF SCIENCE IN HORTICULTURE	
QUALIFICATION CODE: 07BHOR	LEVEL: 7
COURSE CODE: PTP610S	COURSE NAME: PLANT PHYSIOLOGY
SESSION: JULY 2023	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Dr Grace N. Kanguuehi
MODERATOR:	Prof Theo Wassenaar

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly.3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Examination question paper
2. Answering book

THIS QUESTION PAPER CONSISTS OF 2 PAGE (Including this front page)

QUESTION 1

- 1.1. What is the difference between angiosperms and gymnosperms? (2)
- 1.2. What is phytochrome (Pfr) and why is Pfr important to plants? (3)
- 1.3. Differentiate between a plant cell and an animal cell, by listing the main difference between the two cells. (4)
- 1.4. What do you understand by the term Glycolysis? (5)
-

[14]

QUESTION 2

- 2.1. Photosynthesis is a two-step process, discuss the steps and mention the location where it is taking place. (10)
- 2.2. How does soil pH affect nutrient availability, soil microbes, and root growth? (6)
- 2.3. Define active transport and then list and discuss the three (3) active transport processes in a plant. (6)
- 2.4. Define photoperiodism and describe its three (3) forms? (7)
- 2.5. List four (4) plant growth hormones and describe their functions. (8)
-

[37]

QUESTION 3

- 3.1. Explain how photosynthates are transported in plants. (10)
- 3.2. Water deficit can have a negative impact on plant production. In your own words, discuss the morphological, physiological, biochemical and growth responses of plants to drought stress that can affect their productivity. (12)
- 3.3. Describe how water potential, evapotranspiration, and stomatal regulation influences transportation of water in plants. (12)
- 3.4. Define plant anabolism and describe the three stages of anabolism in details. (15)
-

[49]

Final Marks: 100