



ZIMBABWE U. - ERS-
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EXAMINATIONS OFFICE

GARY MAGADZIRE SCHOOL OF AGRICULTURE
DEPARTMENT OF SOIL AND PLANT SCIENCES
BACHELOR OF SCIENCE HONOURS DEGREE IN CROP SCIENCE
LEVEL 1 SEMESTER 1
MAIN EXAMINATION QUESTION PAPER

MODULE CODE: ACS 112
MODULE NARRATION: PLANT BIOLOGY
DATE:
DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES:

1. Answer any **FOUR** questions.
2. Each question carries 25 marks.

Question 1

- a) Explain the **C3** pathway. [5]
- b) Outline the role of any **ten (10)** plant cell organelles. [20]

Question 2

Distinguish the following:

- a) Epigeal and hypogeal germination. [5]
- b) Day neutral and short-day plants. [5]
- c) C3 and C4 plants. [5]
- d) Photoperiodism and vernalization. [5]
- e) Plant and animal cell. [5]

Question 3

- a) Outline the advantages of being a C4 plant. [5]
- b) Describe water uptake by maize through the water gradient from soil to leaves. [20]

Question 4

Discuss:

- a) the functions of any **five (5)** growth regulators. [10]
- b) methods that can be used to break seed dormancy. [15]

Question 5

Describe the process of photosynthesis in maize. [25]

Question 6

- a) Explain the importance of photoperiodism. [10]
- b) Describe the different types of tropisms. [15]

END OF EXAMINATION PAPER