



**GARY MAGADZIRE SCHOOL OF AGRICULTURE AND NATURAL  
SCIENCES**

**DEPARTMENT OF SOIL AND PLANT SCIENCES**

**BACHELOR OF SCIENCE (HONOURS) DEGREE IN AGRICULTURE**

**LEVEL 4 SEMESTER 1**

**EXAMINATION QUESTION PAPER**

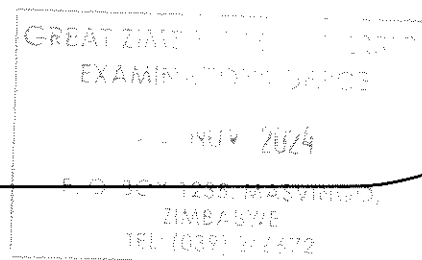
**MODULE CODE**                      **ACS414**  
**MODULE NARRATION**        **PLANT BREEDING**  
**DATE**  
**DURATION**                        **3 HOURS**

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**INSTRUCTIONS TO CANDIDATES:**

Answer any **FOUR** questions

Each question carries **25 marks**



**Question 1**

Describe the objectives in plant breeding of cotton in Zimbabwe. [25]

**Question 2**

Discuss the potential application of molecular breeding methods in Zimbabwe. [25]

**Question 3**

Develop a breeding program for a new company that intends to produce a drought tolerant sorghum variety. [25]

**Question 4**

Discuss challenges in the use of male sterility in seed development. [25]

**Question 5**

Discuss mechanisms of self-incompatibility in sexually reproducing plants. [25]

**Question 6**

a) Discuss the effects of inbreeding in agriculture. [10]

b) Discuss the traits that one can incorporate in cotton variety under climate change environments. [15]

**END OF EXAMINATION PAPER**