

**BINDURA UNIVERSITY OF SCIENCE EDUCATION**  
**FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE**

**MFS512**

**Department of Agricultural Economics, Education and Extension**  
**Master of Food Security and Sustainable Agriculture**  
**SUSTAINABLE CROP PRODUCTION**

**(2)**

**3 Hours (100 marks)**

**INSTRUCTIONS**

Answer all questions in Section A and two questions in Section B.

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**SECTION A**

1. a) Discuss how the application of sustainable agriculture principles will address the challenges being faced in conventional agriculture system in Zimbabwe. [20 marks]  
b) Explain how agro-ecosystems modify natural systems. [10 marks]  
c) Discuss the characteristics of a sustainable crop production systems. [20 marks]

**SECTION B**

2. a) Explain the concept of agroecology [15 marks]  
b) Explain how sustainable crop production systems promote biodiversity in agroecosystems. [10 marks]
3. Discuss the concept of sustainable intensification. [25 marks]
4. a) Discuss Nutrient Management in sustainable crop production systems. [10 marks]  
b) Explain the four tiered approach in Integrated Pest Management. [15 marks]

**END OF PAPER**