



*"Investing in Africa's Future"*

**COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES**

**AAE101 INTRODUCTION TO AGRICULTURAL ENGINEERING**

**END OF SEMESTER EXAMINATIONS**

**NOVEMBER 2019**

**LECTURER: DR. CHITEKA**

**DURATION: 3 HOURS**

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***INSTRUCTIONS***

***Answer 5 Questions***



1. The choice of construction materials has a bearing on the durability of a farm building. Discuss five factors that determine type of material to be used in construction of a farm structure. [20]
2. Discuss the principles that guide the citing of farm structures. Give concrete examples in order to demonstrate your understanding of the deciding factors. [20]
3. Discuss poultry housing requirements under the headings below and for each one discuss the main considerations and indicate the recommended practices.
  - (a) Building orientation [5]
  - (b) Building citation [5]
  - (c) Processing facilities [5]
  - (d) Biosecurity [5]
4. Discuss the role of agricultural engineering in farming enterprises. In your presentation give concrete examples to support your arguments. [20]
5. Selection of type of milking parlour and the citing with respect to other farm structures are guided by a number of factors. A farmer has a dairy herd of 40 milking cows. Decide on the suitable type of parlour to select and give reasons for your choice. [20]
6. The conduit pipes for water often break as a result of water hammer. Explain the causes of water hammer and write a short brief on precautions that farmers should take to prevent water hammer and the resultant pipe breakages. [20]

**END OF EXAMINATION PAPER**