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UNIVERSITY OF SWAZILAND  
FINAL EXAMINATION PAPER

PROGRAMME; BSc. AGRICULTURAL AND BIOSYSTEMS ENGINEERING YR 3

COURSE CODE:            ABE 305

TITLE OF PAPER: RESEARCH METHODS

TIME ALLOWED: TWO (2) HOURS

SPECIAL MATERIAL REQUIRED: NONE

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY TWO OTHER  
QUESTIONS

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CHIEF INVIGILATOR

**QUESTION 1: COMPULSORY QUESTION**

- a) Discuss two purposes of a hypothesis. (10 marks)
- b) Describe four practices that should be avoided in research. (12 marks)
- c) Describe five action verbs that can be used in specific research objectives. (10 marks)
- d) Discuss the conditions under which scatterplots can be used to present results of a research, using examples to illustrate your answer. (8 marks)

**QUESTION 2**

- a) Discuss the difference between simple random sampling and stratified random sampling, indicating conditions under which each of the sampling methods can be used. (15 marks)
- b) Discuss five factors to be considered when designing a survey research. (15 marks)

**QUESTION 3**

- a) Discuss five reasons why literature review is important in research. (15 marks)
- b) Discuss the difference between Completely Random Design and Randomised (Complete) Block Design, using examples to illustrate your answer. (15 marks)

**QUESTION 4**

- a) Discuss what is meant by the statement that Research objectives should be "SMART". (15 marks)
- b) Discuss five questions that a researcher should ask herself/himself when identifying a research problem. (15 marks)