



**UNIVERSITY OF SWAZILAND  
FINAL EXAMINATION PAPER**

**PROGRAMME:** DIPLOMA IN AGRICULTURE AND DIPLOMA IN  
AGRICULTURE EDUCATION YEAR 3

**COURSE CODE:** LUM 305 M (Old Programme)

**TITLE OF PAPER:** LAND USE PLANNING

**TIME ALLOWED:** TWO (2) HOURS

**SPECIAL MATERIAL REQUIRED:** NONE

**INSTRUCTIONS:** ANSWER QUESTION ONE AND ANY TWO  
OTHER QUESTIONS.

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN  
GRANTED BY THE CHIEF INVIGILATOR**

**SECTION A. COMPULSORY QUESTION****Question One**

- a. The principles of land use planning include knowledge of the number of homesteads, residents and livestock population, and land and water resources in an area. Explain why such information is necessary and what can it be used for?

20 marks

- b. Based on the available data on land characteristics give land capability classes and suitability classification for maize production for the following land parcels as well as their recommended land uses. Where land is not suitable for maize production indicate limiting factors and recommend corrective measures if possible.

LAND CHARACTERISTICS	LAND PARCELS				
	A	B	C	D	E
SOIL DEPTH (CM)	20	40	85	100	60
SLOPE (%)	6	20	3	1	5
EROSION PROBLEMS	Moderate	Severe	Moderate	Moderate	None
WETNESS PROBLEMS	Moderate	Moderate	Slight	None	Severe
CAPABILITY CLASS					
SUITABILITY FOR MAIZE					

20 marks

**SECTION B. ANSWER ANY TWO QUESTIONS****Question Two**

- a. Discuss how quantitative survey is different from qualitative survey.

10 marks

- b. Explain the meaning of the following terms as used in land use planning;
- i. grid survey
  - ii. land evaluation
- 10 marks
- c. Give two limitations considered permanent when evaluating land for agricultural purposes and justify your answers using examples.
- 10 marks

**Question Three**

- a. Describe the differences between land quality and land facet (or land unit) as used in land use planning. 15 marks
- b. Explain the meaning of the following terms as used in land use planning;
- i. Remote sensing
  - ii. Land characteristics
  - iii. Land tenure system 15 marks

**Question Four**

- a. Calculate the mean scale of a photograph taken from approximately 4500m above the ground, when the camera constant is 150mm. Assuming that, two more photographs were taken using the same camera at 300m above the 4500m mean altitude and the other at 250m below, what would be their scales? 15 marks
- b. How would you identify land features from a remotely sensed image using texture and shape. Give examples of the features. 10 marks
- c. Explain the significance of stereoscopic viewing of aerial photographs in data collection for land use planning purposes. 5 marks



**UNIVERSITY OF SWAZILAND  
FINAL EXAMINATION PAPER**

**PROGRAMME: BSC. LWM (YEAR 3)**

**COURSE CODE: LUM 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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**QUESTION 1 (COMPULSORY QUESTION)**

- a Discuss four methods that can be used for data collection, specifying conditions under which each of the methods can be used. (20 marks)
- b Discuss the differences between exploratory research and confirmatory research. (20 marks)

**QUESTION 2**

- a Describe two methods of measuring validity of research findings. (15 marks)
- b Describe how systematic random sampling can be used in a research to determine the effects of an innovation in a community. (15 marks)

**QUESTION 3**

Describe the content of a research proposal, highlighting the critical information to be included in the proposal. (30 marks)

**QUESTION 4**

Discuss four methods that can be used to accomplish nonprobabilistic sampling. (30 marks).