



**UNIVERSITY OF SWAZILAND  
MAIN EXAMINATION PAPER**

**PROGRAMME: BSC IN AGRICULTURAL & BIOSYSTEMS  
ENGINEERING**

**COURSE CODE: ABE 401**

**TITLE OF PAPER: LAND EVALUATION AND PLANNING**

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

**SPECIAL MATERIAL REQUIRED: NONE**

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

**SECTION I: COMPULSORY QUESTION****QUESTION ONE**

- a. Explain the meaning of land evaluation and its importance in land use planning?

**10 marks**

- b. Explain the meaning following components of the land capability and suitability classification structures: Give examples where possible.

- Land capability classes /5 marks
- Land suitability order /5 marks
- Land capability subclass /5 marks
- Land suitability class /5 marks

**20 marks**

- c. Explain why is it important to encourage participation of the local community in a land use planning activity?

**10 marks****[40 marks]****SECTION TWO: ANSWER ANY TWO QUESTIONS****QUESTION TWO**

- a. Describe the process of analysing and developing a problem statement in preparation for a land use planning project. In your description include the following factors:

- |      |                              |     |
|------|------------------------------|-----|
| i.   | the existing situation       | /10 |
| ii.  | land units system            | /5  |
| iii. | land use problems (symptoms) | /5  |
| iv.  | the problem statement        | /5  |

**20 marks**

- b. Describe the possible positive and negative impacts that could be identified when carrying out an Environmental Impact assessment for a dam construction.

**10 marks****[30 marks]**

**QUESTION THREE**

- a. List five reasons why it is important to monitor a land use planning project during and after implementation?

**10 marks**

- b. Explain the meaning of the following terms as used in land use planning;

- i. reconnaissance survey /5
- ii. semi-detailed survey /5

**10 marks**

- c. Give two limitations considered permanent when evaluating land for agricultural purposes and justify your answers using examples.

**10 marks****[30 marks]****QUESTION FOUR**

- a. Inadequate subsistence production is one of the most common symptoms of land use problems in rural areas.

- i. Describe two possible underlying causes for the problem. /10
- ii. What possible solution (in form of a land use planning project) could be done to solve the problem? /5
- iii. Describe any two factors that would enhance its success at local level and at national level. /10

**25 marks**

- b. Explain what a cost benefit ratio is and why it is important in a land use appraisal process?

**5 marks****[30 marks]**