



W1-2-60-1-6

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY  
UNIVERSITY EXAMINATIONS 2017/2018**

**FOURTH YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF  
LAND RESOURCE AND MANAGEMENT**

**ALP 2403: LAND EVALUATION I**

**DATE: JANUARY 2018**

**TIME: 2 HOURS**

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**INSTRUCTIONS:**

- This paper contains four questions
  - Question one carries 30 marks and Each of the other three questions carries 20 marks
  - Answer Question ONE and any other TWO questions.
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**QUESTION ONE (COMPULSORY)**

- (a) Define the following terms: [6 marks]
- i. Land evaluation      ii. Land quality      iii. Diagnostic criteria
- (b) Name and briefly describe the three modern non- FAO land classification methods. [3 marks]
- (c) Explain the importance of carrying out land evaluation. [3 marks]
- (d) Describe and differentiate between arable land and irrigable land. [2 marks]
- (e) Discuss the fundamental principles employed in FAO land suitability evaluation. [6 marks]
- (f) Describe the four recognized categories of the FAO structure of the suitability classification. [2 marks]
- (g) Discuss the nature, effects and assessment of some four land qualities. [8 marks]

## QUESTION TWO

- (a) Discuss the objective and the principles of the USBR for land suitability for irrigation (10 marks)
- (b) Discuss and distinguish between the two stage and parallel approaches to land evaluation (4 marks)
- (c) Explain in details the major problems of the land capability classification. (2 marks)
- (d) Discuss with examples the land improvement classes (4 marks)

## QUESTION THREE

- (a) The USDA Land Capability Classification is a narrowly focused interpretive land evaluation system. Discuss the assumptions applied to this system. (7 marks)
- (b) Land suitability evaluation involves a number of procedures. Discuss in details the main activities involved in land evaluation. (10 marks)
- (c) Explain the purposes served by matching land use with land (3 marks)

## QUESTION FOUR

- (a) Describe and make a distinction between multiple and compound land utilization types with examples (4 marks)
- (b) You have been invited to do a land capability assessment for wheat production under rainfed condition. Discuss five major land qualities that should be used during the assessment. (10 marks)
- (c) What do you understand by classification of current and potential land suitability? (4 marks)
- (d) Describe the USDA sub classes (2 marks)