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**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

# University Examinations 2012/2013

**EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN GEOMATIC AND GEOSPARTIAL ENGINEERING**

# EGE 2525: ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL AUDIT

**DATE: AUGUST, 2012**  **TIME: 2 HOURS**

**INSTRUCTIONS: Answer Question ONE and any TWO other questions.**

**Question One (30 marks)**

a) Define the following terms as used in Environmental Impact Assessment and Audit.

1. Environmental assessment
2. Environmental baseline
3. Public consultation
4. Environmental management plan [8 marks]

b) Discuss the principles of sustainable development. Briefly outline the methods available for enhancing sustainable development. [6 marks]

c) Explain the purpose of scoping in the EIA process and state those involved in the scoping process. [8 marks]

d) State and explain two methods used for Environmental Impact Assessment.

 [8 marks]

**Question Two (20 marks)**

a) Discuss the role of GIS and Remote Sensing could play in the EIA/EA of Lamu port South Sudan Ethiopia Transport Corridor (Lapsset). [10 marks]

b) Distinguish Public Consultation from public participation and outline the requirements of an effective public participation and the benefits of involving the public in the development of a project. [10 marks]

**Question Three (20 marks)**

a) A proposed bypass in Nairobi is predicted to cause pollution and health impacts along its route. Discuss the main types of pollution and health impacts experienced by community along this route and propose possible mitigation measures. [8 marks]

b) The EIA/EA process in Kenya is administered by National Environmental Management Authority (NEMA) which is mandated by the Environmental Management and Coordination Act (EMCA) of 1999. Discuss EIA/EA as a legal requirement in Kenya.

 [8 marks]

c) Explain the main elements of mitigation in the EIA process. [4 marks]

**Question Four (20 marks)**

You have been approached by the government as an expert in EIA/EA for advice concerning the proposed construction of a bypass passing through Nairobi National Park. In your advice to the government, explain the possible impacts of this project and explain the possible mitigation measures of this project. [20 marks]

**Question Five (20 marks)**

a) Explain the methods used for impact prediction in EIA. [5 marks]

b) Outline the contents of Environment Impact Statement. Explain the shortcomings and main issues of EIA/EA as practiced in Kenya. [10 marks]

c) Explain the Ad Hoc method as used in Environmental Impact Assessment. [5 marks]