



# **MACHAKOS UNIVERSITY**

**University Examinations For 2018/2019 Academic Year**

**SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT**

**DEPARTMENT OF ENVIRONMENTAL SCIENCES**

**FOURTH YEAR SECOND SEMESTER EXAMINATION FOR**

**BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE CONSERVATION)**

**ENS 454: MINING AND SUSTAINABLE DEVELOPMENT**

**DATE: 2/5/2019**

**TIME: 11:00 – 1:00 PM**

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**INSTRUCTIONS: Answer question ONE and TWO other questions**

## **QUESTION ONE (COMPULSORY) (30 MARKS)**

- a) Explain the importance of mining in the realization of sustainable development goals of a country (10 marks)
- b) Briefly discuss any **FIVE** strategies to protect water resources from the adverse impacts of mining operations (10 marks)
- c) Explain FIVE ways in which a community can participate in the rehabilitation and utilization of mined areas (10 marks)

## **QUESTION TWO (20 MARKS)**

Discuss the criteria to use in developing a monitoring programme for controlling the adverse impacts associated with mining activities in an area

## **QUESTION THREE (20 MARKS)**

Suppose you have been appointed to oversee the formulation of a mining policy for your County, explain how you would develop such a policy and highlight the challenges you are likely to face

**QUESTION FOUR (20 MARKS)**

Using an example of a mining project, discuss the adverse environmental impacts of Acid Mine Drainage and explain how to appropriately deal with the impacts

**QUESTION FIVE (20 MARKS)**

Discuss the occupational safety and health challenges associated with mining and explain how to deal with the challenges