



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL SCIENCES

FOURTH YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF ENVIRONMENTAL STUDIES (RESOURCE MANAGEMENT)

ENS 454: MINING AND SUSTAINABLE DEVELOPMENT

DATE: 21/10/2020

TIME: 8.30-10.30 AM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS)

- a) Explain the importance of mining in the realization of any ONE of Kenya Big Four Development Agenda. (10 marks)
- b) Briefly discuss how you would protect air quality from the adverse impacts of mining (10 marks)
- c) Highlight any FIVE ways of rehabilitating and utilizing areas where mining activities have ceased (10 marks)

QUESTION TWO (20 MARKS)

Discuss the rationale for and strategies of developing a suitable monitoring programme in areas where mining operations occur

QUESTION THREE (20 MARKS)

Suppose you have been appointed to advise your Governor on how to ensure sustainable mining operations in the County, discuss how you would undertake the assignment

QUESTION FOUR (20 MARKS)

- a) Explain the term Acid Mine Drainage (5 marks)
- b) Discuss strategies you would institute to deal with the adverse impacts of Acid Mine Drainage (15 marks)

QUESTION FIVE (20 MARKS)

Discuss any FIVE social challenges associated with mining activities and explain how to manage the challenges