



DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY
GEOHERMAL TRAINING AND RESEARCH INSTITUTE
DEPARTMENT OF GEOLOGY
MASTER OF SCIENCE IN GEOHERMAL EXPLORATION
GET 3010: ENVIRONMENTAL SUSTAINABILITY

INSTRUCTIONS

- 1) TIME ALLOCATED – 3 hours
- 2) There are five questions in this paper
- 3) Attempt only THREE questions
- 4) Question 1 is compulsory

SECTION A (30 MARKS)

QUESTION 1

- a. Briefly describe some of the Sustainable Development Goals (SDGs) related to the geothermal exploration in the Kenyan context (5 marks)
- b. Briefly discuss the potential environmental effects of Geothermal Energy exploitation (5 marks)
- c. Briefly describe the term environmental risk assessment and its application in geothermal exploitation (5 marks)
- d. Briefly differentiate between EIA and SEA as used in environmental management (5 marks)
- e. Describe three types of ecological data that should be collected during EIA baseline survey (5 marks)
- f. Briefly describe the terms mitigation and project alternatives as used in EIA process (5 marks)

SECTION B (30 MARKS) Answer any TWO questions from this section

QUESTION 2

- a) Discuss the Environmental Management Plan (EMP) (5 marks)
- b) Develop an EMP for a proposed geothermal well in the Menengai area in Nakuru (10 marks)

QUESTION 3

- a) Describe the policy, legal and institutional framework of an EIA/SEA (10marks)
- b) Develop a framework for the EIA for a proposed geothermal well stated (5 marks)

QUESTION 4

- a) With a flow chart illustrate the EIA process steps (10 marks)
- b) Briefly the chapters of an EIA report (5 marks)

QUESTION 5

- a) Discuss the basic principles/premises of EIA and SEA (10 marks)
- b) Describe the role of NEMA in the initiation of various building projects in Kenya (5 marks)