



MACHAKOS UNIVERSITY

University Examinations for 2017/2018

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL STUDIES AND COMMUNITY
DEVELOPMENT

THIRD YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF
ENVIRONMENTAL STUDIES (COMMUNITY DEVELOPMENT)

ECD 315:ENERGY RESOURCES AND COMMUNITY DEVELOPMENT

DATE: 6/12/2017

TIME: 11.00-1.00 PM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE

- a) Define the following terms:
 - i. Energy sustainability (2 marks)
 - ii. Co-generation (2 marks)
 - iii. Energy audit (2 marks)
 - iv. Feed in Tariff (2 marks)
 - v. Clean Development Mechanism (2 marks)
- b) Explain five reasons why there are fluctuations in world oil prices globally (10 marks)
- c) Explain five challenges related to hydropower development in Kenya. (10 marks)

QUESTION TWO (20 MARKS)

- a) Discuss 5 factors that have contributed to low access to electricity in Africa (10 marks)
- b) Explain the various programmes that Kenya is involved in to enhance access to electricity. (10 marks)

QUESTION THREE (20 MARKS)

Outline five energy efficiency practices in the following sectors:

- a) Transport (10 marks)

- b) Industry (10 marks)

QUESTION FOUR (20 MARKS)

- a) List 5 sustainable development goals that are linked to energy development. (5 marks)
- b) Discuss how the Sustainable Development Goals are linked to energy development in Kenya (15 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the environmental challenges related to the development of fossil fuels in the Mui basin (Kitui) and its impact on the community. (15 marks)
- b) Explain the link between carbon trading and energy development (5 marks)