



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF AGRICULTURE AND NATURAL RESOURCE MANAGEMENT

DEPARTMENT OF ENVIRONMENTAL STUDIES

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE
ENVIRONMENTAL STUDIES AND COMMUNITY DEVELOPMENT.**

ECD 315: ENERGY RESOURCES AND COMMUNITY DEVELOPMENT

Date: 29/11/2016

Time: 8:30 – 10:30 AM

INSTRUCTIONS:

Answer Question One and Any Other Two Questions

SECTION A

1. a) Explain the following terms:
 - i) Energy Security (2 marks)
 - ii) Renewable Energy Resources (2 marks)
 - iii) Fuel substitution (2 marks)
 - iv) Mini- Hydro (2 marks)
 - v) Biofuel (2 marks)

- b) Explain five (5) measures that can be used to enhance energy efficiency at home. (10 marks)

- c) Highlight five (5) institutions involved in the development of the energy sector and explain their specific roles. (10 marks)

SECTION B: ANSWER ANY OTHER TWO QUESTIONS

2. Discuss five (5) advantages and five (5) disadvantages of the Rural Electrification programme in Kenya. (20 marks)

3. Explain five (5) categories of energy resources used in the world today and their associated challenges. (20 marks)

4. Discuss the link between development of energy resources and the sustainable development goals. (20 marks)

5. The Government has announced plans to develop a hydroelectric power plant within your County to enhance access to electricity within your area. Discuss the environmental impacts related to this project. (20 marks)