Strathmore
UNIVERSITY

SCHOOL OF COMPUTING AND ENGINEERING SCIENCES
MASTER OF SUSTAINABLE ENERGY TRANSITION
END OF SEMESTER EXAMINATION
MSSET 8104: ENERGY POLICY, LAWS AND REGULATIONS

DATE: 15th December 2023   **Time: 18:00-20:30 Hours**

Instructions

1.   This examination consists of **FOUR** questions.
2.   Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

QUESTION ONE   **[20 MARKS]**

a) Give reasons why the energy sector is the most heavily regulated industry.   **[4 marks]**

b) With examples, discuss the difference between the target population and beneficiaries of energy policy instruments.   **[4 marks]**

c) Select an energy policy/regulation in Kenya or elsewhere that you are familiar with and discuss it under the following main points.

   i)   Objectives of the energy policy / regulation
   ii)   Target population and beneficiaries
   iii)   Main clauses/ sections of the regulation
   iv)   Any revision on the selected policy / regulation that is undergoing or been done in the past point out the major revisions.   **[12 marks]**

QUESTION TWO   **[15 MARKS]**

a) What are the main challenges facing Utility Regulation in Africa   **[3 marks]**

b) Discuss how each of the following approaches can be used in regulating the energy sector. Give the strengths and weaknesses of each approach

   i)   Command-and-control
   ii)   Self-regulation
   iii)   Incentive-based regulation

iv)   Market-based controls   **[12 marks]**

QUESTION THREE   [15 MARKS]

a) Show with examples some Policy Tools/instruments and how they are used to Prevent Market Failure   **[5 marks]**

b) Differentiate the three major degrees of policy failure that can be experienced in the energy sector.   **[3 marks]**

c) What are the key elements of Regulatory Impact Assessments (RIAs) that are used in energy sector policy developments and review.

QUESTION FOUR   [15 MARKS]

a) Define a Power Purchase Agreement (PPA) and give its benefits on an energy-regulated economy.   **[6 marks]**

b) Discuss the main risks that are associated with administration of power purchase agreements   **[7 marks]**