

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**RESIT/SPECIAL EXAMINATION**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE  
IN ENVIRONMENTAL SCIENCE**

**ENSC 221: ENERGY AND THE ENVIRONMENT**

**STREAMS: BSC ENSC**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 10/08/2021**

**8.30 A.M – 10.30 A.M.**

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**INSTRUCTIONS:**

- Answer ALL questions in section A and any two in section B.

**SECTION A (30 marks)**

1. Briefly explain the working of evacuated tubes. (6 marks)
2. Briefly discuss the process of formation of coal. (6 marks)
3. An electric water pump with power rating of 1.5 Kw is used for a total of ten hours per day for one week.
  - a. Calculate the energy consumed. (3 marks)
  - b. Determine the useful energy if it has an efficiency of 90%. (3 marks)
4. Outline any six ways by which energy can be conserved in public transportation. (6 marks)
5. Outline the merits and demerits of wood fuel. (6 marks)

**SECTION B (40 marks)**

6. Discuss the obstacles to energy conservation in developing countries. Discuss. (20 marks)
7. It would be a big challenge for any nation to rely 100% on renewable energy. Discuss. (20 marks)
8. Discuss the potential environmental impacts from the exploitation of newly coal in Mui basin, Kenya if open cast mining was to be used. (20 marks)

