

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**SECOND YEAR EXAMINATION FOR THE AWARD OF  
BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE**

**ENSC 202: ENERGY AND THE ENVIRONMENT**

**STREAMS: BSC (ENSC) Y2S1**

**TIME: 2 HOURS**

**DAY/DATE: THURSDAY 11/12/2014**

**2.30 PM – 4.30 PM**

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**INSTRUCTIONS:**

**Answer all questions in section A and any two in section B**

**SECTION A (30 MARKS)**

1. Work done is equivalent to energy consumed. Briefly discuss. [3 marks]
2. Briefly explain two energy transformation processes by which the energy content in natural gas can be converted into light energy. [3 marks]
3. Briefly discuss the formation of oil from organic materials. [3 marks]
4. Outline the process involved in coming up with a fuel assembly from raw uranium ore. [5 marks]
5. Briefly explain the impacts of woodfuel shortages. [6 marks]
6. With illustrations, differentiate between passive from active solar heating. [5 marks]
7. Briefly highlight the short-term and long-term impacts of the energy crisis of 1973. [5 marks]

**SECTION B (40 MARKS)**

8. Mining of coal is rarely environment-friendly. Discuss. [20 marks]
9. (a) Discuss the importance of converting biomass fuels into other forms. [10 marks]

(b) Renewable energy resources are not always appropriate sources of energy.  
Discuss with specific examples. [10 marks]

10. Discuss the importance of energy conservation in sustainable development.  
[20 marks]

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