



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91 Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi, Abuja.
DEPARTMENT OF SCIENCE EDUCATION

EXAMINATION: 2021_1

COURSE CODE: SED328

COURSE TITLE: ENERGY AND MATTER II

CREDIT UNIT: 2

TIME ALLOWED: 2HOURS

INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO

1. a. Define:
(i) primary pollutants and
(ii) secondary pollutants. (5 Marks x 2 = 10 Marks)
- b. Discuss briefly, the following phenomena:
(i) Green house effect (5 Marks)
(ii) Global warming. (5 Marks)
- c. Name four (4) measures that could be used to resolve the issue of global warming.
(2.5 x 4 = 10 Marks)
2. a. (i) Posit a tenable definition for the form of energy known as Thermal Energy
(5 Marks)
(ii) Identify five sources you can use to produce Thermal energy. (5 Marks).
- b. (i) What is entropy? Substantiate your response with appropriate equation.
(5 Marks).
(ii) How is entropy applied in a chemical process? (5 Marks).
3. a. With the aid of chemical equations to substantiate your response, discuss the process of formation of acid rain. (10 marks)
- b. What is Ozone? Discuss four important health effects of ground level ozone.
(10 Marks)
4. a. (i) What is nuclear energy? (ii) How is this form of energy produced? (10 Marks)
- b. Present the processes; Nuclear fission and Nuclear fusion by stoichiometric equations.
(10 Marks)