



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

**EXAMINATION: 2021\_2**

**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. What constitutes particulate matters? (10 marks)
  - b.
    - i. State two (2) ways that one can become exposed to lead? (10 marks)
    - ii. Discuss any four (4) negative effects of exposure to lead. (10 marks).
2.
  - a.
    - i. What is the resultant product when emitted hydrocarbons react with NO<sub>x</sub> in the presence of sunlight? (5 marks).
    - ii. How is the resultant product in a(i) above important to the earth's atmosphere? (5 marks)
  - b. Identify four (4) adverse effects of exposure to Lead. (10 marks)
3.
  - a. Write briefly on the following phenomena;
    - i. wet deposition and
    - ii. dry deposition? (5 marks x 2 = 10 marks)
  - b. Describe the process of acid deposition and the effect it has on forest and aquatic lives. (10 marks)
4.
  - a. Outline two (2) health problems associated with short term exposure and three (3) for long-term exposure to Sulphur (iv) oxide (SO<sub>2</sub>) (10 marks)
  - bi. Give clear distinctions between primary particles and secondary particles (6 marks)
  - bii. Provide two examples of primary particles and two examples of secondary particles (4 marks)