



**National Open University of Nigeria**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Science**  
**Environmental Science and Resources Management**  
**2025\_2 EXAMINATIONS**

---

**COURSE CODE: ESM311**

**COURSE TITLE: Noise and Air Pollution**

**CREDIT: 2<sup>1</sup>/<sub>2</sub> Units**

**Instructions: 1. Attempt question Number one (1) and any other (2).**

*Question Number 1 is compulsory and carries 30 marks, while other questions carry equal marks of (20 marks) each.*

- 1a. Explain the process of smog formation. **(20 Marks)**
- 1b. Outline the causes and effects of the major types of smog. **(10 Marks)**
2. With relevant examples, differentiate between primary and secondary pollutants. **(20 Marks)**
- 3a. Discuss common indoor pollutants. **(10 Marks)**
- 3b. Suggest strategies for improving indoor air quality **(10 Marks)**
- 4a. Identify five 5 renewable energy sources in Nigeria. **(10 Marks)**
- 4b. Analyze the role of renewable energy sources in pollution mitigation in Nigeria. **(10 Marks)**
5. Describe the different levels of noise exposure and their corresponding effects on human health. **(20 Marks)**