



QUALIFICATION : BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES	
QUALIFICATION CODE: 08BEHS	LEVEL: 6
COURSE: AIR POLLUTION AND NOISE	COURSE CODE: APN 612S
DATE: NOVEMBER 2023	SESSION: 2
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY: QUESTION PAPER

EXAMINER: *Prof Omotayo Awofolu*

MODERATOR: *Dr Larai Aku-Akai*

INSTRUCTIONS

1. Answer all questions in the answer booklet provided.
2. Please write **neatly** and **legibly**.
3. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
4. No books, notes and other additional aids are allowed.
5. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS

1. Non-Programmable Calculator

ATTACHEMENTS

1. None

This paper consists of 3 pages including this front page

SECTION A:**[25 MARKS]****QUESTION 1:****[25 MARKS]**

- 1.1 The size of Particulate Matters (PMs) are linked to their potential to cause adverse health effects. State the characteristics of particles that are referred to as “fine particles”. (4)
- 1.2 Enumerate the characteristics used to describe odour during measurement by sensory technique. (4)
- 1.3 EHS students that are receiving lecture on Air Pollution are exposed to noise of about 95dB from a nearby construction company during this period. List any five (5) possible effects of the noise on the students. (5)
- 1.4 In a step-wise manner, state the process you will take in investigating noise pollution complaint by a resident. (6)
- 1.5 Using illustration, briefly explain how you will measure a pollutant gas using the Bubbler System. (6)

SECTION B:**[35 MARKS]****QUESTION 2:****[35 MARKS]**

- 2.1 Briefly explain your understanding of Photochemical Smog and state any two (2) of its impacts on human health. (4)
- 2.2 Explain the term “organoleptic method” and state its advantage over the chemical Method, (4)
- 2.3 Customers of a local entertainment outlet were found to be exposed to sound pressure level (SPL) of 50 μ Pa. Given the hearing threshold value as 20 μ Pa. Determine the Sound Pressure level (in dB). (5)
- 2.4 Briefly discuss how air pollution can influence climate change. (6)
- 2.5 Outline the desirable characteristics expected of all air sampling devices. (8)
- 2.6 Your neighbourhood is close to a major highway and hence, exposed to noise emanating from vehicles. Express any four (4) control options you will present to the municipal manager in order to mitigate against the noise. (8)

SECTION C:**[40 MARKS]****QUESTION 3:****[40 MARKS]**

- 3.1 Explain the concept of the natural greenhouse effect with the aid of an illustration. (8)
- 3.2 Communities can also contribute to the issue of air pollution. Summarise any four (4) of these contributions. (8)
- 3.3 State any four (4) situations in which the municipal by-laws allow for the broadcast of noise and give an example in each case. (8)
- 3.4 Provide examples of air polluting activities that are targeted by legislation. (6)
- 3.5 Differentiate between Regulatory Law and Statutory Law and give examples of implementation of each. (10)

END OF QUESTION PAPER