



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

**Faculty of Health, Natural
Resources and Applied
Sciences**

School of Health Sciences

Department of Preventative
Health Sciences

13 Jackson Kaujeua Street T: +264 61 207 2970
Private Bag 13388 F: +264 61 207 9970
Windhoek E: dphs@nust.na
NAMIBIA W: www.nust.na

QUALIFICATION : BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES	
QUALIFICATION CODE: 08BEHS	LEVEL: 6
COURSE: AIR POLLUTION AND NOISE	COURSE CODE: APN 612S
DATE: JANUARY 2024	SESSION: 2
DURATION: 3 HOURS	MARKS: 100

SUPPLEMENTARY/SECOND 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. None

ATTACHEMENTS

1. None

This paper consists of 3 pages including this front page

SECTION A:**[20 MARKS]****QUESTION 1:****[20 MARKS]**

- 1.1 Provide any four (4) characteristics expected to be possessed by all air sampling devices. (4)
- 1.2 Differentiate between passive and non-passive sampling systems and state their advantages and disadvantages. (6)
- 1.3 Describe the following terms:
- i. Photochemical smog (4)
 - ii. Air pollution (3)
 - iii. Organoleptic method (3)

SECTION B:**[24 MARKS]****QUESTION 2:****[24 MARKS]**

- 2.1 Patrons of an entertainment outlet were found to be exposed to sound Pressure Level of 30 μPa , given the lowest hearing threshold to be 20 μPa . Deduce the Sound Pressure level (SPL) in decibel. (4)
- 2.2 Clarify the primary methods that can be used to improve indoor air quality. (6)
- 2.3 Summarise the impacts of acid rain on the environment. (5)
- 2.4 Describe any six (6) sources of air pollutants at homes. (9)

SECTION C:**[56 MARKS]****QUESTION 3:****[20 MARKS]**

- 3.1 Differentiate between Statutory and Regulatory Laws and give an example in each case. (4)
- 3.2 Establish the primary methods that can be used to improve the quality of indoor air. (6)
- 3.3 Explain the following terms:
- i. Sleep disturbance (3)
 - ii. Inlet manifold (3)
 - iii. Bubbler system (4)

QUESTION 4:**[36 MARKS]**

- 4.1 Differentiate between Statutory and Regulatory Laws and give an example of Namibian law in each case. (6)

- 4.2 Explain how businesses contribute to the problem of air pollution through various activities (8)
- 4.3 Discuss any five (5) impacts of global warming on human and environmental Health. (10)
- 4.4 Differentiate between the following terms giving example in each case:
- i. Sound and Noise (3)
 - ii. Weather and Climate (3)
 - iii. Primary and secondary pollutants (3)
 - iv. Wet deposition and dry deposition (3)

END OF QUESTION PAPER