



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH AND APPLIED SCIENCES

DEPARTMENT OF HEALTH SCIENCES

| | |
|--|---|
| QUALIFICATION : BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES | |
| QUALIFICATION CODE: 08BEHS | LEVEL: 6 |
| COURSE CODE: APN 612S | COURSE NAME: AIR POLLUTION AND NOISE |
| SESSION: JANUARY 2019 | PAPER: THEORY |
| DURATION: 3 HOURS | MARKS: 100 |

| SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION QUESTION PAPER | |
|--|---------------------------|
| EXAMINER(S) | PROFESSOR OMOTAYO AWOFOLU |
| MODERATOR: | DR LARAI AKU-AKAI |

| INSTRUCTIONS |
|--|
| <ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly.3. Number the answers clearly. |

THIS QUESTION 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: (10)
- 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 $30 \mu\text{Pa}$, given the lowest hearing threshold to be $20 \mu\text{Pa}$. 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: (10)
- 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: (12)
- i. Sound and Noise (3)
 - ii. Weather and Climate (3)
 - iii. Primary and secondary pollutants (3)
 - iv. Wet deposition and dry deposition (3)
-

TOTAL: 100 MARKS