



***“Investing in Africa’s Future”***

**COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES**

**DEPARTMENT OF PUBLIC HEALTH AND NURSING**

**NSHS 210: ENVIRONMENTAL & OCCUPATIONAL HEALTH**

**END OF SECOND SEMESTER EXAMINATION**

**JANUARY/JUNE 2021**

**LECTURER: MR. R. DOZVA**

**DURATION: (7 HRS)**

***INSTRUCTIONS***

Do NOT write your name on the answer sheet.

Answer (fully) any one question of your choice.

Begin your answer for each question on a new page.

Each full question carries 100 marks.

Font: Times New Roman, Font size 12, Line space: 2.0.

Credit is given for neat, well-written and lucid work.

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## QUESTION 1

- 1a. Describe the importance of International Labour conventions 155 (safety and health) and 161(Occupational health services) in the management of occupational health. [25]
- 1b. Define a primary and secondary pollutant and two examples of each [9]
- 1c. Name any two air pollution control devices and their mode of operation [16]
- 1d. Write short notes on the following
- i. Chernobyl disaster [10]
  - ii. Trafigura dumps [10]
  - iii. Lead [5]
- 1e. Describe the water treatment process. [25]

## QUESTION 2

- 2a. Describe the importance of the Montreal protocol and the Basel convention in the management of environmental health. [25]
- 2b. Explain the importance of occupational exposure limits. [13]
- 2c. Calculate the concentration of dust in milligrams per cubic metre ( $\text{mg/M}^3$ ) using the following data: Pump flow rate 2litres per minute; Sampling time 4 hours 10 minutes; Weight of dust 5000 micrograms [12]

2d. Write short notes on the following

- i. Bhopal disaster [10]
- ii. Piper Alpha disaster [10]
- iii. Legionella disease [5]

2e. Describe the most common three methods of food preservation. [25]

### QUESTION 3

3a. Discuss the legislative and management systems approaches in the management of environmental and occupational health [25]

3b. What is the hierarchy of control? [10]

3c. Apply this principle to control chemical hazards in a room where different chemicals including benzene are being manually mixed to come up with a solvent. [15]

3d. Write short notes on the following

- i. Minamatta bay mercury poisoning [10]
- ii. Sick building syndrome [10]
- iii. Occupational stress [5]

3e. Discuss the polluter pay principle in waste management. [25]