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"Investing in Africa's Future"

COLLEGE OF SOCIAL SCIENCES, THEOLOGY, HUMANITIES AND EDUCATION

HES327 ENVIRONMENTAL POLLUTION AND CONTROL

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER/DECEMBER 2018

LECTURER: Dr D. Mlambo

DURATION: 3 HRS

GENERAL INSTRUCTIONS TO CANDIDATES

1. **Do NOT write your name on the answer sheet**

2. Answer **THREE** questions only

3. Question **1** in Section A is **Compulsory**

4. Answer any **TWO** questions from Section B

5. Begin your answer for each question on a new page

6. Each question is worth a total of **25 marks**

7. Credit will be given for neat, well-written and lucid work.

SECTION A

1. With reference to a named water body experiencing eutrophication, describe the sources of nutrient pollutants and suggest methods of reducing pollution to the water body.

SECTION B

2. With the aid of diagrams, illustrate how the following devices are used to control particulate matter
   a) Cyclone   [9 marks]
   b) Electrostatic precipitator   [8 marks]
   c) Wet scrubber   [8 marks]

3. Giving examples, evaluate the effectiveness of any four pollution charges used by government departments and agencies to reduce pollution.

4. Describe the characteristics, sources and effects of the following air pollutants on the environment:
   a) Nitrogen dioxide   [7 marks]
   b) Sulphur dioxide   [6 marks]
   c) Carbon dioxide   [6 marks]
   d) Carbon monoxide   [6 marks]

5. a) Identify any four sources of noise pollution and suggest methods of controlling the pollution   [16 marks]
   b) Outline the effects of noise pollution on human health   [9 marks]

END OF EXAMINATION PAPER