

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# **UNIVERSITY EXAMINATIONS 2014/2015**

**FOURTH YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH**

**IPH 2403 : ENVIRONMENTAL POLLUTION**

**DATE: DECEMBER 2014 TIME: 2 HOURS**

**INSTRUCTIONS:**

**ANSWER ALL QUESTIONS IN SECTION A AND ANY OTHER ONE QUESTION IN SECTION B**

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**SECTION A [48 MARKS]**

**QUESTION ONE**

Describe specific sources of pollution that may affect

1. Lithosphere [2 marks]
2. Biosphere [2 marks]
3. Stratosphere [2 marks]

**QUESTION TWO**

Define heavy metals and state their sources in the environment [6 marks]

**QUESTION THREE**

Identify and explain what the government can do to control environmental pollution in Kenya. [5 marks]

**QUESTION FOUR**

Discuss how technology can affect

1. Human health [2 marks]
2. Socio-cultural environment [2 marks]
3. Local environment [2 marks]
4. Global environment [2 marks]

**QUESTION FIVE**

1. Define the term natural toxics [1 mark]
2. Explain the source and effects of aflotoxin to human health [5 marks]

**QUESTION SIX**

Define the term xenobiotics and identify their sources [4 marks]

**QUESTION SEVEN**

1. Identify three types of mutagens describing their sources [4 marks]
2. Identify and explain TWO types of persistent organic pollutants and their effects to human health [4 marks]

**QUESTION EIGHT**

Lead (pb) and mercuty Hg) are examples of heavy metals in the environment. Briefly identify their effects to human health [6 marks]

**SECTION B [22 MARKS]**

**QUESTION NINE**

1. Describe how you will sample and analyse
2. Soil [4 marks]
3. Water [4 marks]
4. Air [4 marks]
5. Identify briefly the likely samples of pollution in the groundwater. Show also how the groundwater can be protected from pollution. [8 marks]
6. Identify two types of plants that can be used to indicate pollution [2 marks]

**QUESTION TEN**

1. Explain the following as related to toxic kinetics
2. LCg50 [3 marks]
3. Ldg50 [3 marks]
4. Describe ways the toxics are removed from the body [10 marks]
5. With the use of a particular chemical, describe how chemicals are transformed :
6. Water [3 marks]
7. Air [3 marks]

**QUESTION ELEVEN**

1. Differentiate between hard and soft laws [4 marks]
2. Describe the trial smelter B.C. case and how it shaped laws on environmental pollution in the world [10 marks]
3. Describe the term “polluter pays principle and how its used in environmental sustainability [6 marks]
4. Define the term geomedicine. [2 marks]