



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF WATER**

**RESOURCE MANAGEMENT AND WATER ENGINEERING**

**2<sup>TH</sup> YEAR 1<sup>ST</sup> SEMESTER 2017/2018 ACADEMIC YEAR**

**REGULAR**

---

**COURSE CODE: PES 3213**

**COURSE TITLE: ENVIRONMENTAL POLLUTION AND CONTROL I**

**EXAM VENUE:**  
**Water Eng.)**

**STREAM: (B Sc. Water res &**

**DATE:**

**EXAM SESSION:**

**TIME: 2.00 HOURS**

---

-

**Instructions:**

- 1. Answer question 1 (Compulsory) in Section A and ANY other 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

## **INSTRUCTIONS**

### **SECTION A: COMPULSORY QUESTION (30 MARKS)**

- 1 (a) What is the Greenhouse effects? (4 Marks)
- (b) Describe the smog formation in the atmosphere (4 Marks)
- (c) Discuss the importance of null cycle in the cycle gases in the environment (4 Marks)
- (d) How does the contribution of non-methane volatile organic compounds to the depletion of the Environment (4 Marks)
- (e) Show how the movement, the storage and the fate of pollutants in the following sections of Hydrosphere
- (i) Rain water
  - (ii) Streams and rivers
  - (iii) Lake water
  - (iv) Ground water
  - (v) Sea water
- (f) Why is noise a pollutant to the environment? (4 Marks)
- 10 Marks

### **SECTION B: ATTEMPT ANY TWO QUESTIONS (40 MARKS)**

#### **QUESTION TWO**

- (a) Describe the following factors affecting the Hydrosphere, atmosphere and lithosphere
- (i) Acid rain (8 Marks).
  - (ii) Particulates and aerosols (4 Marks)
  - (iii). Human dimensions of global environmental Change (8 Marks)

#### **QUESTION THREE**

- (a) Describe at least five important contribution of the combustion process to air pollution. (10 Marks)
- (b) How do we get clean environment? (10 Marks)

#### **QUESTION FOUR**

- (a) Discuss the main effects of pollutants to the atmosphere. (8Marks )
- (b) Name the above(a) pollutants? (4 Marks)
- (c) Taking at least two main examples of the effects of climate change in the environment. Prove that the above have adversely affect our environment. (8 Marks )

### **QUESTION FIVE**

- (a) What is Ozone destruction? (8 Marks.)
- (b) Differentiate between the Ozone hole and Ozone destruction (6 Marks)
- (c) How are the effects of the above (b) pollutants are felt in the atmosphere (6 Marks)