



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY  
SCHOOL OF SPATIAL PLANNING  
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
WATER RESOURCE AND ENVIRONMENTAL MANAGEMENT  
SEMESTER 2016/2017 ACADEMIC YEAR**

**CENTRE: MAIN CAMPUS**

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**COURSE CODE: PES 3321**

**COURSE TITLE: ENVIRONMENTAL EDUCATION AND EXTENSION**

**EXAM VENUE: STREAM: SPATIAL PLANNING**

**DATE: EXAM SESSION:**

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer question 1 ( compulsory ) and ANY other 2 questions.**
- 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.**

## **QUESTION ONE**

a.) Explain the following weather phenomenon:-

i.) Lanina (3marks)

ii.) El nino (3 marks)

iii.) Dipole (3 marks)

iv.) Rain seeding (3 marks)

v.) Fog harvesting (3 marks)

b.) Some pastoralist communities have sold part of their land, using the proceeds to increase their livestock herds. Discuss the dangers posed by their action. (10 marks)

c.) Explain the importance of environmental education to all school going children. (5 marks)

## **QUESTION TWO**

a.) Discuss the advantages and disadvantages of participatory learning and action approach in an environmental education and extension community initiative. (10 marks)

b.) Explain the reasons why environmental and ecology standards should be explained to all stakeholders within a settlement area. (10 marks)

## **QUESTION THREE**

a.) Owimbi Anglican Church's women leader, Nyagem Lelo, held a seminar for their faithful on the importance of Environmental Impact Assessment (E.I.A) for all the church's physical projects. Explain her points. (10 marks)

b.) Discuss the measures that the villagers may undertake to reverse the effects of soil erosion and leaching. (10 marks)

## **QUESTION FOUR**

a.) Ben Oluoch plans on researching on environmental issues affecting Bondo County. Explain to him how to access primary and secondary data for his research. (10 marks)

b.) Discuss how to take samples for study of a specific area's rainfall PH value. (10 marks)

## **QUESTION FIVE**

a.) Discuss two Millennium Development Goals (MDGs) that were related to the environment.

(10 marks)

b.) Explain two Sustainable Goals (SGs) related to the environment.

(10 marks)