



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF SPACIAL PLANNING AND NATURAL RESOURCES MANAGEMENT
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHALOR OF WATER AND
ENVIRONMENTAL RESOURCES**

3RD YEAR 2ND SEMESTER 2024/2025 ACADEMIC YEAR

ONLINE STUDENTS

COURSE CODE: PNB 1310

COURSE TITLE: SOIL AND WATER CONSERVATION MANAGEMENT

DATE: 25/4/2025

SESSION :15.00-17.00

TIME: 2HOURS

VENUE: LR 10

Instructions:

- 1. Answer ALL questions in Section A and ANY TWO IN SECTION B**
- 2. Hand in your answer booklet before you leave the examination room.**

SECTION A: ANSWER ALL QUESTIONS (30MARKS)

1. (a) Name **five** factors which influence soil development (**5marks**)
- (b) Mountains are classified according to the mode of their formation. List **four** types (**4marks**)
- (c) An understanding of the temporal and spatial characteristics of precipitation central to water resources planning and management, especially given the evidence of climate change and variability in recent years . Considering precipitation patterns, name **four** areas where such information is important. (**4marks**)
- (d) What controls the seasonality of rainfall in Kenya and East African region? (**1mark**)
- (e) What is soil erosion and why should it be prevented? (**2marks**)
- (f) Name **four** major forms of soil erosion (**4marks**)
- (g) As you observe farming techniques in your home village, one factor that comes out clearly is that the way they are ploughing is not proper because village is on a gentle slope. Which farming techniques would you recommend to minimize soil and water loss in the village? (**5marks**)
- (h) Deforestation is brought about by natural occurrences and human activities as it is true with many other environmental problems. It may occur abruptly when the forest is cleared for agricultural production or more gradually as a result of unsustainable logging practices. List other **five** factors that contribute to deforestation (5marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40MARKS)

1. (a) Discuss the economic importance of mountains (**10marks**)
- (b) Discuss the economic importance of plateaus (**10marks**)
2. (a) Discuss how plains have influenced human life (**10marks**)
- (b) Discuss the factors that control the rate and magnitude of soil erosion caused by wind (**10marks**)
3. (a) Discuss various methods which are used in controlling soil and water loss (**10marks**)
- (b) Discuss the principles of water harvesting and conservation (**10marks**)