



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
FOURTH YEAR FIRST SEMESTER/ THIRD YEAR
FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL
RESOURCE MANAGEMENT
BACHELOR OF SCIENCE IN FORESTRY/
BACHELOR OF SCIENCE IN ECOSYSTEM
MANAGEMENT**

**COURSE CODE: FEM 3120/FOR 410
COURSE TITLE: SOIL AND WATER
CONSERVATION**

DATE: 14TH DECEMBER 2018

TIME: 8.30 -10.30AM

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in section A and any other **THREE** in section B.

This paper consists of 2 printed pages. Please turn over.

SECTION A. ANSWER ALL THE QUESTIONS (25 MARKS)

1. a) Explain the terms as used in wind erosion **(2 marks)**
- (i) Saltation
 - (ii) Abrasion
- b) Describe briefly the processes involved in soil erosion **(3 marks)**
2. a) Define soil erosion **(2 marks)**
- b) Explain the overall objectives of soil and water conservation **(3 marks)**
3. a) Explain conditions that influence assessment of wind erosion **(2 marks)**
- b) Explain briefly factors influencing soil water degradation **(4 marks)**
4. a) What do you understand by the term erosivity **(1 mark)**
- b) Giving examples, describe agronomic measures for conservation of soils on farm lands **(2 marks)**
5. a) Explain the process of soil erosion **(3 marks)**
- b) Describe how conservation agriculture can help in controlling soil erosion **(3 marks)**

SECTION B. ANSWER ANY THREE QUESTIONS (45 MARKS)

6. a) Describe how forests help to conserve soil and water **(7 marks)**
- b) Describe factors influencing soil water degradation **(8 marks)**
7. Discuss the factors considered in assessment and modeling of soil erosion based on Universal Soil Loss Equation (USLE) **(15 marks)**
8. Discuss water conservation measures/strategies in arid and semi-arid lands for trees or crops establishment **(15 marks)**
9. Discuss the factors affecting soil erosion **(15 marks)**
10. Discuss the appropriate approaches used in conservation of soils so as to minimize soil erosion effects in agricultural fields **(15 marks)**

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