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**University Examinations 2015/2016**

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR DIPLOMA IN AGRICULTURE

**NAR 0241: SOIL AND WATER CONSERVATION**

**DATE: AUGUST, 2016 TIME: 1 ½ HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two*** *questions.*

**QUESTION ONE – (30 MARKS)**

1. Explain the following terms as used in soil and water conservation: (6 Marks)
2. Soil degradation
3. Soil tolerance
4. Soil erosion index
5. Discuss briefly the influence of conservation tillage. (5 Marks)
6. Discuss briefly the universal soil loss equation. (10 Marks)
7. Briefly describe three methods of soil erosion measurements. (9 Marks)

**QUESTION TWO (15 MARKS)**

1. Briefly explain two biological and two cultural methods of soil erosion control(6 Marks)
2. Discuss briefly the factors that affect erosion by water. (9 Marks)

**QUESTION THREE (15 MARKS)**

1. Explain briefly the factors that affect wind erosion. (6 Marks)
2. Given that the slope of a land s 20%, soil erodibility factor is 4 and rainfall erosivity is 6. Determine the vertical and horizontal interval of the terrace. (6 Marks)
3. Describe briefly the importance of water harvesting in agriculture. (3 Marks)

**QUESTION FOUR (15 MARKS)**

1. Differentiate between a level and a grade terraces. (4 Marks)
2. Describe briefly on the following physical structures in a farm: (6 Marks)
3. Cut-off drain
4. Retention ditch
5. Discuss briefly the effect of soil erosion. (5 Marks)