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**University Examinations 2015/2016**

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR THE DIPLOMA IN AGRICULTURE

**NAR 0241: SOIL AND WATER CONSERVATION**

**DATE: NOVEMBER 2015 TIME: 11/2 HOURS**

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

**QUESTION ONE (30 MARKS)**

1. Explain why soil erosion control should be important to every farmer. (4 Marks)
2. Describe the control measures farmers use to control wind-caused erosion. (5 Marks)
3. List and explain major types of soil erosion (6 Marks)
4. Describe the importance of water in agricultural form. (5 Marks)
5. List and discuss the main causes of accelerated soil erosion. (6 Marks)
6. Differentiate between cut-off drain and retention ditch. (4 Marks)

**QUESTION TWO (15 MARKS)**

1. Discuss two methods of water harvesting. (6 Marks)
2. Describe briefly the importance of conservation tillage. (5 Marks)
3. Explain this two terms as used in soil. Soil erosion tolerance and land degradation (4 Marks)

**QUESTION THREE (15 MARKS)**

1. Discuss the visual indicators of soil erosion (8 Marks)
2. Explain two categories of terraces (6 Marks)
3. What is soil erosion index? (1 Mark)

**QUESTION FOUR (15 MARKS)**

1. Describe the application of universal soil loss equation. (3 Marks)
2. According to the soil survey for a given area the soil has T=5.0, K=0.18, R=135, LS=0.6. The grower uses conventional tillage to grow continuous corn and ploughs up and down the slope. The farmer used no support practices so P=1 and the value of C under conventional is 0.37. Use this information to answer the following questions:
3. Compute the soil loss (3 Marks)
4. What if the farmer changes to contour ploughing i.e. P from 1 to 0.5? (3 Marks)
5. What is the soil erosion index? (2 Marks)
6. Explain the wind erosion equation (4 Marks)