

**EASTERN UNIVERSITY, SRI LANKA**  
**THIRD YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE**  
**2001/2002- NOVEMBER 2002**  
**AEN 3201 – SOIL & WATER CONSERVATION AND METEOROLOGY**

Answer all questions.  
Time allowed: 2 hours.

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01.
  - a. Define the term Soil erosion.
  - b. Briefly discuss the Mechanics of soil erosion.
  - c. Briefly describe the physical factors of rainfall in relation to soil erosion.
  
02.
  - a. Briefly discuss the normal forms of erosion.
  - b. Give the USLE with its variable.
  - c. The soil loss from a field under standard condition was 175 Mton/ha/yr. The field has a slope of 6% with a slope length of 100 m (LS factor is 1.2). If there were no conservation practices adopted in this field and the allowable limit of soil loss from the field was 1.5 Mton/ha/yr, determine the crop management factor required.
  
03.
  - a. Give the layout of a typical meteorological station.
  - b. Comment on the factors considered in selecting a site for a meteorological station.
  - c. List the climatic variables recorded in a meteorological station and the instruments used for that purposes.
  - d. Briefly discuss the advantages of recording rain gauges over non-recording rain gauges.
  
04.
  - a. List the spare parts, which should be kept at the meteorological station.
  - b. Briefly explain the maximum and minimum thermometer.
  - c. Illustrate and briefly discuss the operation and use of the ' Campbell stokes sunshine recorder'.