

11 OCT 2014

**EASTERN UNIVERSITY, SRI LANKA**  
**SECOND YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE- 2006/07**  
**(June 2014)**  
**AEN 2201 - IRRIGATION WATER MANAGEMENT (2:30/00)**  
**REPEAT- (External Degree)**

Answer all questions.

Time: Two hours

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01. (a) What do you understand by the following terms,
- i. Capillary water
  - ii. Net water requirement
- (b) Calculate the bulk density, water content on weight basis and water content on volume basis of a soil when a soil core of 10cm diameter and 8 cm length weighs 1110.50 g immediately after sampling and 981.58 g after oven drying at 105°C.
02. (a) What do you mean by the term 'infiltration rate'?
- (b) Briefly discuss the factors affecting the infiltration rate.
- (c) Give the steps involved in the calculation of crop evapotranspiration (ET<sub>c</sub>).
03. Write short notes
- (a) Kinds of soil water
  - (b) Advantages and disadvantages of sprinkler irrigation system
04. (a) State the importance of the wetting pattern of different soil types and explain the causes for poor wetting pattern during irrigation.
- (b) Briefly discuss the advantages and disadvantages of the surface irrigation methods.
- (c) Discuss the factors that determine the method of irrigation.
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