

EASTERN UNIVERSITY, SRI LANKA

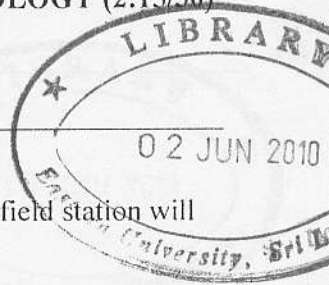
THIRD YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE- 2008/2009

(April/May 2010) – Old curriculum

AEN 3201 – WATER MANAGEMENT TECHNIQUES AND METEOROLOGY (2:15/30)

Answer all questions.

Time: One hour



01. (a) Briefly comment on how the location of Batticaloa meteorological field station will affect the quality of data being gathered.
- (b) Comment on how the presence of vegetation will affect the local climate of an area.
- (c) (i) Check the homogeneity of the wind velocity of the stations 'X' and 'Y'
- (ii) The given data of one station are found to be heterogeneous. A rearrangement of the instrumental layout was done in the year 1979 in this station. Adjust the data of this station for homogeneity in relation to the other station.

Year(19..)	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
Station X	225	215	235	225	205	215	235	205	215	235	205	195	215	205	195	185
Station Y	225	235	245	205	265	225	245	235	195	205	185	175	195	185	175	165

Number of Data (n)	Range (u)
12	5-8
14	5-10
16	6-11
18	7-12
20	8-13
22	9-14
24	9-16

02. (a) Give the classification of irrigation methods
- (b) State the importance of the wetting pattern of different soil types and explain the causes for poor wetting pattern during irrigation.
- (c) Briefly discuss the advantages and disadvantages of the surface irrigation methods.
- (d) Discuss the factors that determine the method of irrigation.
- (e) An irrigation pump discharges water at the rate of 10,400 litres per hour and works seven hours each day. Estimate the area commanded by the water lift if the average depth of irrigation is 6cm and irrigation period is 14 days.