

**Uva Wellassa University**  
**Faculty of Animal Science & Export Agriculture**  
**BSc in Export Agriculture**  
**BSc in Tea Technology and Value Addition**



**End Semester Examination – January/February 2016**  
**Year 1 Semester II**

**Irrigation and Water Management (EAG 131-2)**

**Instructions**

Answer **all** questions

No. of questions : Three (03)

No. of pages : Two (02)

Time : One (01) Hour

Total marks allocated : 40 %

**Index No:**

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**PART III - ESSAY**

**Question 1**

Write short notes on following;

(40 Marks)

- 1.1. Moisture extraction pattern of the root system of an annual plant.
- 1.2. Different growth stages of an annual plant based on sensitivity to water shortages.
- 1.3. Factors affecting on absorption, conduction and transpiration of water from plants
- 1.4. Irrigation scheduling

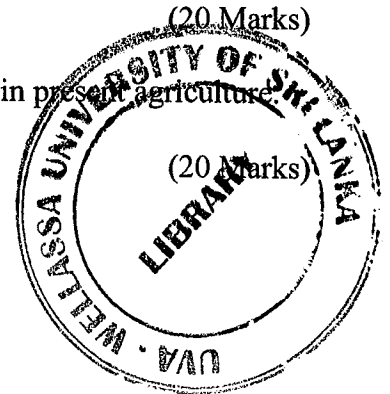
**Question 2**

2.1. Briefly discuss the components of an irrigation system.

(20 Marks)

2.2. Briefly discuss the suitability of different water application methods in present agriculture.

(20 Marks)



### Question 3

The following table shows the data obtained from a practical carried out at a crop field.

Soil Depth (cm)	Field Capacity (%)	Permanent Wilting Point (%)	Bulk Density (g/cm <sup>3</sup> )
0 – 20	25.1	10.8	1.51
20 – 40	24.8	11.1	1.52
40 – 60	24.4	11.4	1.54
60 – 80	23.9	11.3	1.55
80 – 100	23.5	11.2	1.56
100 – 120	23.1	11.0	1.57
120 – 140	22.8	10.9	1.58
140 – 160	22.5	10.8	1.59

Estimate;

- 3.1. available water holding capacity of each layer of soil. (20 marks)
- 3.2. net irrigation requirement of each layer of soil, if irrigation is done at 40 % depletion of available water holding capacity of these layers. (20 marks)