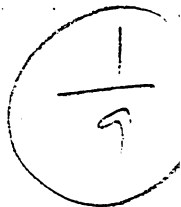


# KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Ag. 2014 Admission

II<sup>nd</sup> Semester Final Examination- July/August-2015



Cat. No: Agro.1203

Title: Irrigation and Water Management (2+1)

Marks: 50

Time: 2 hours

I Fill up the blanks/Answer the questions as indicated

(10 x 1=10)

1. ----- is the name given to exchange of heat between growing crop and surrounding dry fallow whereby hot wind passing through the crop is cooled to give heat for evaporation
2. A soil moisture content of 10% on soil volume basis is equivalent to ----- cm.m
3. ----- is the name given to water potential due to the adsorption of water to the soil surfaces
4. Removal of excess water from soil through artificial measures is -----
5. Run off occurs because of ----- (splash erosion, sheet erosion, rill erosion, gully erosion)
6. Contour bunds are recommended for areas with slopes from ----- degree to ----- degree
7. Write the full form of SALT-----
8. Write the formula to find vertical interval, VI = -----
9. State true or false: Soil moisture at - 8 kPa is not available to plants
10. State true or false: In mineral soils, unlike bulk density, particle density can be taken as a constant value

II Write short notes on any FIVE

(5 x 2=10)

1. What do you mean by SMD (Soil Moisture Deficit)
2. Write short note on critical stages of wheat
3. Write a short note on scheduling irrigation
4. Moisture extraction pattern
5. Distinguish between watershed area and command area
6. Distinguish between soil erodibility and soil erosivity
7. Puertoican terraces

III Write short notes on any FIVE

(5 x 4=20)

1. Write a brief essay on the management techniques to improve WUE of crops
2. Discuss the importance of soil moisture constants in irrigation management
3. Write in brief how monitoring of profile moisture changes helps in decision making for irrigation management
4. What are the advantages of subsurface drainage? Explain various subsurface drainage types

- ✓ 5. Write a brief essay on USLE and tolerable soil loss
- ✓ 6. Explain various agronomic measures of soil conservation
- ✓ 7. Define watershed. What are the differences between small watershed and large watershed

What are the objectives of watershed management

**IV Write essay on ANY ONE**

(1 x 10 = 10)

1. Enumerate different approaches for scheduling irrigation and explain in detail climatologic approach of scheduling irrigation
- ✓ 2. Give a broad classification of soil conservation methods. Explain briefly on various terracing techniques.

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