



**KERALA AGRICULTURAL UNIVERSITY**  
**B. Tech. (Agrl. Engg.) 2023 & Previous Admissions**  
**IV Semester Final Examination – June 2025**

Iden.2206

**Irrigation Engineering (2+1)**

**Marks: 50**  
**Time: 2 hours**

**(10x1=10)**

**I**

**Fill in the blanks**

1. The total depth of water application to the crop is called .....
2. A sheet of water, which overflows a weir, is .....
3. The basic formula to calculate the discharge through weir is .....
4. A recommended safe limit of land slope for efficient irrigation in heavy soil is.....
5. Water held by force of surface tension is .....
6. A project which is designed to irrigate an area of ..... hectares or less is classified as a minor irrigation.
7. The horizontal to vertical side slope in case of Cipoletti weir is .....
8. Cohesion of water molecules is due to .....
9. .... is the ratio of the quantity of water delivered to the field and quantity of water pumped into the canal.
10. Lysimeter is used to measure .....

**II**

**Write short notes on ANY FIVE of the following**

**(5x2=10)**

1. Irrigation
2. Sources of irrigation water
3. Field capacity
4. Land grading
5. Infiltration
6. Irrigation Interval
7. Capillary water

**III**

**Answer ANY FIVE of the following**

**(5x4=20)**

1. Define advantages and disadvantages of irrigation.
2. Write down different irrigation water measurement units for both condition viz. rest and motion.
3. Explain area – velocity method of water measurement.
4. Define different types of open channel flow.
5. Find the delta ( $\Delta$ ) for a crop when its duty (D) 432 hectares/cumec in the field and base period (B) of the crop is 150 days.
6. Define land levelling and its different methods.
7. What is Evapotranspiration? Explain factors affecting Evapotranspiration.

**IV**

**Write an essay on ANY ONE of the following**

**(1x10=10)**

1. What is weir? Explain different term related to weir and also explain advantages and disadvantages of weir.
2. Write down advantages of underground pipeline system and its different components.

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