I

Fill in the blanks
1 One ha cm of water is equal to-------------litres
2 --------is the upper limit of available moisture in the soil.
3 The effective flow velocity at unit hydraulic gradient is called-----------
4 ET_crops is equal to ETo x --------------
5 The irrigated area in Kerala out of total cultivated area is -------------%.
6 A research station under KAU mandated for research in water management is------
7 Water loss due to percolation in low land rice is-------------%.
8 Water potential of pure water is ----------atm
9 At field capacity, moisture is held in the soil at a tension of ---------atm.

State True or False
10 Lower the bulk density of soil, more is the soil porosity

II

Write Short notes on ANY FIVE of the following (5x2=10)
1 Forms of water erosion.
2 Lysimeter.
3 IW/CPE ratio
4 Potential Evapo Transpiration
5 Field Water use efficiency
6 Drainage Coefficient
7 Consumptive use

III

Answer ANY FIVE of the following (5x4=20)
1 Define critical periods of moisture, mention critical periods of rice and explain phasic stress irrigation schedule.
2 Significance of soil moisture characteristic curve.
3 Rainfall erosivity and erosivity indices.
4 Suitability of Irrigation water.
5 If the soil wet weight is 25g, dry weight is 20g and bulk density is 1.5g/cm³, work out available soil moisture in cm/metre depth of soil.
6 List out the microirrigation methods and mention the parts of a drip irrigation system.
7 List out important causes of water logging.

IV

Write an essay on ANY ONE of the following (1x10=10)
1 List out the soil moisture constants and explain their significance in irrigation management.
2 Define Water Requirement(WR) of crops, list out the components of WR and explain factors affecting WR.

***************