

ASSIGNMENT

CHAPTER -2 --Irrigation and Hydraulic Structures

Semester:6th,

B. Tech.

Department:

Civil Engineering

1. The field capacity and permanent wilting point for a given 0.8 m root-zone soil are 35 and 10 per cent, respectively. At a given time, the soil moisture in the given soil is 20 per cent when a farmer irrigates the soil with 250 mm depth of water. Assuming bulk specific gravity of the soil as 1.6, determine the amount of water wasted from the consideration of irrigation.
2. The consumptive use for a given crop is 90 mm. Determine the field irrigation requirement if the effective rainfall and the irrigation efficiency in the area are 15 mm and 60 per cent, respectively.
3. Find the delta for a crop when its duty is 864 ha/cumec on the field, base period of the crop is 120 days.
4. Wheat is to be grown at a certain place, the useful climatological conditions are tabulated below. Determine the evapotranspiration and consumptive irrigation requirement of wheat crop. Also determine the field irrigation requirement if the water application efficiency is 80%. Use Blaney-Criddle equation taking a crop coefficient of 0.8.

Month	Temp In °C	% Day-Time Hours	Rainfall In cm
<i>November</i>	18.0	7.20	1.7
<i>December</i>	15.0	7.15	1.42
<i>January</i>	13.5	7.30	3.01
<i>February</i>	14.5	7.10	2.25

Note: Prepare the above assignment within one week i.e. upto 12th.. May-2020. Keep it ready with you. You may have to submit it when asked within a short notice of time.