

ASSIGNMENT

CHAPTER -3--Canal Irrigation

Semester:6th, B.Tech.

Department: Civil Engineering

1. Design the most efficient cross-section of a lined trapezoidal canal to carry a discharge of 15 cumecs when the maximum permissible velocity is 2 m/s. Assume the side slope as 1: 1. Also, determine the bed slope for the canal if the Chezy's coefficient C is 60.

2. Design an irrigation channel to carry 50 cumec of discharge. The channel is to be laid at a slope of 1 in 4000. The C.V. R for the soil is 1.1. use Kutter's rugosity coefficient as 0.023.

3. Design an irrigation channel to carry 40 cumec of discharge, with B/D ratio as 2.5. The C.V.R is 1.0. Assume a suitable value of Kutter's rugosity coefficient and use Kennedy's method.

4. Design an earthen channel of 10 cumec capacity. The value of Lacey's silt factor in the neighboring canal system is 0.9. General grade of the country is 1 in 8000.

5. The slope of an irrigation channel is 0.2 per thousand, Lacey's silt factor is 1.0, channel side slope = 0.5:1. Find the full supply discharge and dimensions of the channel.

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.