*Discharge Calculations*

Time Concentration calculation-

tc  = (0.87 x L³/ H)0.385

L = distance from cirital point to structure = 0.22km

H = fall from critical point to structure = 0.5m

tc = 0.21533 hrs

Critical Rainfall Intensity –

Ic = F(T + 1)/T(tc + 1)

Ic = critical rainfall intensity

T = rainfall duration in hours = 24hrs

F = total depth of rainfall in cm = 11.1 cm

Ic = 14.1 cm/hr

Discharge Calculation –

Q = 0.028 P A Ic

P coefficient of runoff = 0.2

A area of catchment = 0.72 hectares

Q= 0.05685 m3 /s = 56.85 L/s