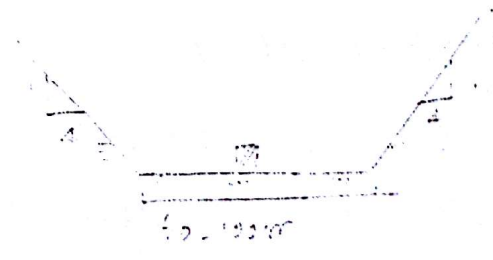


SELECTION FOR A RAIN / SNOW GAUGE :

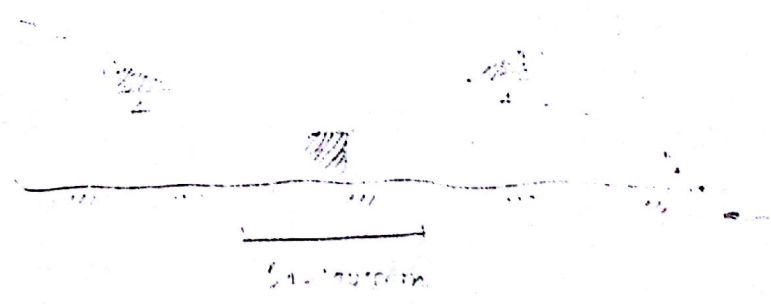
136

- (i) Fairly level ground having dia of 50-100m. 14-civil
- (ii) - The rain gauge site should be open to solar radiations, rainfall and snowfall.
- (iii) - There should be a shelter against strong winds.
- (iv) - For hilly areas, best site is a deep valley with side slopes not exceeding 1:4

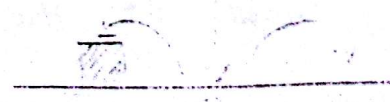


- (v) - For plane areas vegetation should be provided around 50-100m level ground.
- (vi) - None of the obstruction should cross 1:4 line.
obstruction → trees, buildings, etc.

Shamsi Photo Copy
Girls Cafe (U.E.T)
Contact: 0323-4373141



- (vii) - The level ground must be provided with grass to avoid splashing of rain drops - (due to splashing water can go to nearby rain gauge which will cause error).



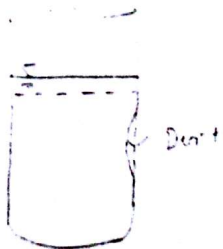
ERRORS IN P.P.T. MEASUREMENT BY RAIN GAUGE

- (i). Insertion of measuring stick in measuring cylinder.
(1% error in observed reading on higher side).
- (ii). Error in the observed reading.
(compensating error, sometime more or sometime less).
- (iii). Instrumental error.
(cumulative error)
- (iv). Dents in the receiver / collector.
(observed will be less than actual reading)



(surface area of receiver)

- (v). Dents in the measuring cylinder.
(observed is high than actual)



(vi). About 0.25mm of amount of rainfall is initially required to wet the rain gauge surface.

e.g.

observed reading = 10mm

Actual reading = 10.25mm

This error is only at the beginning -

In case of high intensity rainfall (100-150 mm/hr) the bucket of tipping bucket type rain gauge requires about 0.3 sec to tip and 6-7 sec to fill the compartment and water is still added into the compartment.

(measured amount is 5% low).

(viii) - Frictional effect in tipping bucket rain gauge -
(less measured value).

(ix) - High wind speed can reduce the catchment area of rainfall -

(measured amount will be less).



(x) - Non-Verticality of the rain gauge. (catchment area is decreased).

10° Inclination of collector reduces catchment area by 1.5%.

(xi) - Leakage in the measuring cylinder -

(measured amount is less)

(xii) - Evaporation of rainfall water from the measuring cylinder.

(measured amount is less) -

→ Assignment :