**Tribhuvan University**

**Institute of Engineering**

**Thapathali Campus**

**Department of Civil Engineering**

**Levelling Sheet**

Date:2078/8/23

Group no:7?

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.N. | BS | | | Mean BS | S1=T-B | FS | | | Mean FS | S2=T-B | Rise/Fall +/- | Elevation(m) | Stadia Interval S=S1+S2 | Hz. Dist. (m) S\*100 | Cumul. Hz. Dist. | Distance from right bank | Correct RL | Remarks |
| T | M | B | T | M | B | (m) |
| 1 | 0.98 | 0.912 | 0.845 | 0.912 | 0.135 |  |  |  |  |  |  |  | 0.135 | 13.5 | 13.5 | 273.3 | 1065.490 |  |
| 2 | 1.485 | 1.4 | 1.31 | 1.398 | 0.175 | 2.24 | 2.16 | 2.08 | 2.16 | 0.16 | -1.248 |  | 0.335 | 33.5 | 47 | 243.8 | 1064.242 |  |
| 3 | 1.482 | 1.385 | 1.29 | 1.386 | 0.192 | 1.565 | 1.4 | 1.34 | 1.433 | 0.23 | -0.035 |  | 0.422 | 42.2 | 89.2 | 203.3 | 1064.207 |  |
| 4 | 1.36 | 1.24 | 1.12 | 1.24 | 0.24 | 1.84 | 1.76 | 1.67 | 1.753 | 0.175 | -0.368 |  | 0.415 | 41.5 | 130.7 | 166.6 | 1063.84 |  |
| 5 | 1.2 | 1.095 | 0.985 | 1.093 | 0.215 | 0.985 | 0.87 | 0.76 | 0.872 | 0.225 | 0.368 |  | 0.44 | 44 | 174.7 | 120.1 | 1064.208 |  |
| 6 | 1.27 | 1.16 | 1.055 | 1.162 | 0.215 | 1.88 | 1.78 | 1.67 | 1.775 | 0.21 | -0.682 |  | 0.425 | 42.5 | 217.2 | 77.6 | 1063.526 |  |
| 7 |  |  |  |  |  | 1.647 | 1.52 | 1.4 | 1.521 | 0.251 | -0.36 |  | 0.251 | 25.1 | 242.3 | 31 | 1063.167 | Lowest Bed Lvl. |
|  |  |  |  |  |  |  |  |  |  |  | -2.323 |  |  |  |  |  |  |  |

**Site Measurements,**

Approximate river width ≈28m

Total measured distance on site=242.3+28+8 ≈ 278.3m

Approximate deepest flow depth ≈38 cm

Width of right bank ≈ 8 m

**Design Data,**

Total Linear Waterway calculated from 100-year design flood = 243 m

HFL before construction= 1064.418m

Lowest Bed Level at design section = 1063.167m

Design high flood depth = 1.2512m

**Check,**

HFL at 243m LWW as measured on site = 1064.242 m < Calculated HFL at section (OK)

Hence the approximate check on section is ok and design can proceed as calculated from 100-year maximum flood.