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**Matric** **no** 18/**ENG03**/059

**Civil** **engineering**

**Assignment** **hydrology**

1Software used in carrying out hydrometer study of a place

* SWAT: is a tool used to evaluate at a basin scale. It is focused in precipitation, Runoff modelling and transport of water and solutes through surface flow
* PRMS: This stands for Precipitation Runoff Modelling System. It is a modelling system of spatially distributed parameters which represent the physical processes of a basin. It evaluates the effects of several combinations of geomorphology, type of soil and climatic parameters in the hydrological response of a basin,
* IRIC: International River Interface Cooperative is a software developed with the purpose of offering a complete simulation environment of the riverbed and its result can be used to analyze, mitigate and prevent disasters.
* QGIS: Is the most popular GIS (Geographical Information system) tool with an impressive trajectory and a warrant community
* SAGAGIS: Is a GIS platform oriented to spatial analysis. SAGAGIS is a simple but powerful tool.

2.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| time | runoff | baseflow | direct runoff | depth of direct runoff | 2hr unit hydrograph ordinate | | |
| 1 | 110 | 110 | 0 | 1.415 | 0 |  |  |
| 2 | 120 | 110 | 10 | 1.415 | 7.067138 |  |  |
| 3 | 230 | 110 | 120 | 1.415 | 84.80565 |  |  |
| 4 | 570 | 110 | 460 | 1.415 | 325.0883 |  |  |
| 5 | 640 | 110 | 530 | 1.415 | 374.5583 |  |  |
| 6 | 430 | 110 | 320 | 1.415 | 226.1484 |  |  |
| 7 | 290 | 110 | 180 | 1.415 | 127.2085 |  |  |
| 8 | 200 | 110 | 90 | 1.415 | 63.60424 |  |  |
| 9 | 160 | 110 | 50 | 1.415 | 35.33569 |  |  |
| 10 | 120 | 110 | 10 | 1.415 | 7.067138 |  |  |
| 11 | 90 | 90 | 0 | 1.415 | 0 |  |  |
| 12 | 80 | 80 | 0 | 1.415 | 0 |  |  |