* **TRUE POSITIVE (TP) -** incidents actually positive and also predicted Positive by the Algorithm

**Example.**  4 – having cancer, 4 - predicted having cancer

Y\_test - 1 , prediction - 1

* **True Negative (TN)** – incidents actually negative and also predicted negative by the Algorithm

Y\_test - 0 , prediction - 0

* **False Positive (FP)** – **Type 1 Error -** Actual – not having cancer , predictions – having cancer – positive

Y\_test - 0 , prediction - 1

* **False Negative (FN)**  - **Type 2 error** - **Actual – having cancer** , predictions – not having cancer

Y\_test - 1, Prediction - 0

**Accuracy** (TP+TN) / (TP +TN +FP +FN)

**Recall** TP / (TP + FN) – (TP+FN – actual values**) – Sensitivity**

**(TP) / (Total Actual Pos.)**

**Precision** TP / (TP+FP) - ( TP+FP = predicted values)

**(TP) / (Total Predicted Pos.)**

**F1 – Score** 2 \*( Recall \* Precision ) **/**  (Precision + Recall)



**Confusion Matric**

|  |  |  |
| --- | --- | --- |
|  | **Predicted Positive** | **Predicted Negative** |
| **Actual Positive** | TP ------ 21 | FN - Type 1 error ---- 20 |
| **Actual Negative** | FP - Type 2 error --- 5 | TN ------- 18 |