**1. LIMITS**

**LIMIT EXISTS:**

**CONTINUITY:** A realvalued function is said to be continuous at , if

**DIFFERENTIABILITY:** A function is said to be differentiable at , if exists.

If and are two continuous/differentiable functions, then

Are also continuous/differentiable functions.

**INDETERMINANT FORMS:**

**L’HOSPITAL RULE:**

If , and , then .

If , and , then .

* L’Hospital rule is a general method for evaluating the indeterminant forms .
* L’Hospital rule can also be applied to other indeterminant forms by converting in to using appropriate algebraic transformations.

If is of then,

**STANDARD LIMITS:**

|  |  |
| --- | --- |
|  |  |
|  |  |

If and are polynomial of degrees “m” and “n” respectively, .

**LIMITS OF FUNCTION OF TWO VARIABLE:**

If as along and If as along , where then does not exists.

**CONTINUITY OF TWO VARIABLE:**

A function of two variables is called continuous at , if .