

# [GLOSSARY]

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# **GLOSSARY**

## Stage i:

Each sub problem of the original problem is known as stage i.

#### Alternative m<sub>i</sub>:

In a given stage i, there may be more than one choice of carrying out a test. Each choice is known as alternative m<sub>i.</sub>

## State variable x<sub>i</sub>:

A possible value of resource within its permitted range at a given stage I is known as state variable  $x_i$ .

## **Recursive function f**<sub>i</sub>(x<sub>i</sub>):

A function which links the measure of performance of interest of the current stage with the cumulative measure of performance of the previous stages/ succeeding stages as a function of the state variable of the current stage is known as the recurrence function of the current stage.

## Best recursive function value:

In a given stage i, the lowest (minimization problem)/ highest (maximization problem) value of the recursive function for a given value of  $x_i$  known as the best recursive function value.

## Best alternative in a given stage i:

In a given stage i , the alternative corresponding to the best recursive function value for a given value of  $x_i$  is known on the best alternative for that value of  $x_i$ .

#### **Backward recursive function:**

Here computation begins from the last stage/ sub problem, and this stage will be numbered at stage 1, while the first sub problem will be numbered as the last stage. This type of recursive function is known as backward recursive function.

## Forward recursive function:

While defining the stages of he original problem, the first sub problem will be numbered as stage 1 and last sub problem will be numbered as the last stage. Then , the recursive function will be defined as per this assumption. This type of recursive function is known as forward recursive function.