**Q.4**

**1. answer:**

A=t(s(s), G, s, p, t(k), s)

B=t(s(G), g, s, p, t(k), U)







**2**.

A = g (l, M, g, G, U, g, v(m))

B= g (l, v(u), g, v(M), v(G), g, v(M))

* ERROR – infinite loop.

3.

A= m (M, N)

B=n (M, N)

* Occurs check Error - Circular connections.

4.

A=p ([v | [V | VV]]

B= p ([[v | V] | VV])

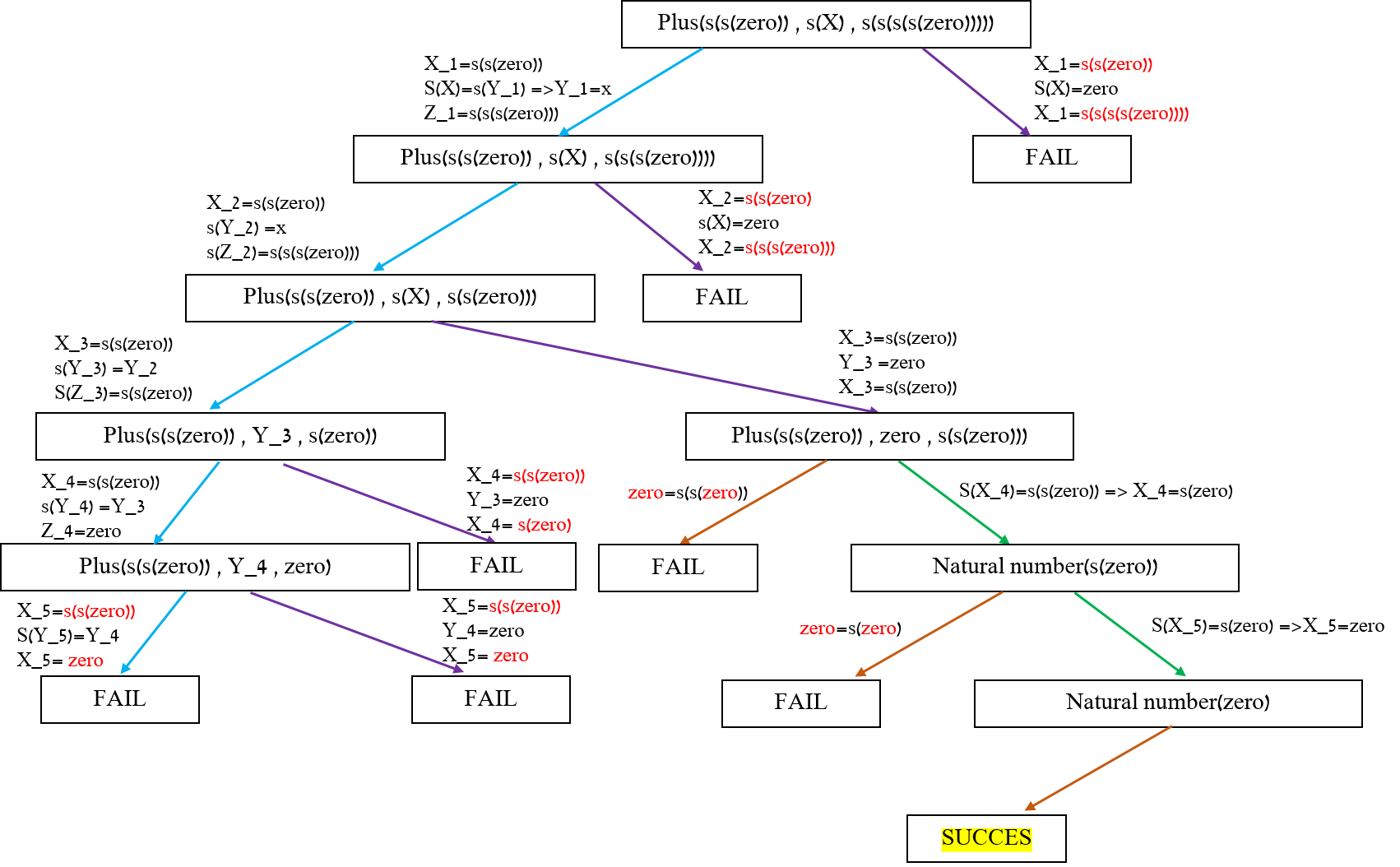
5.

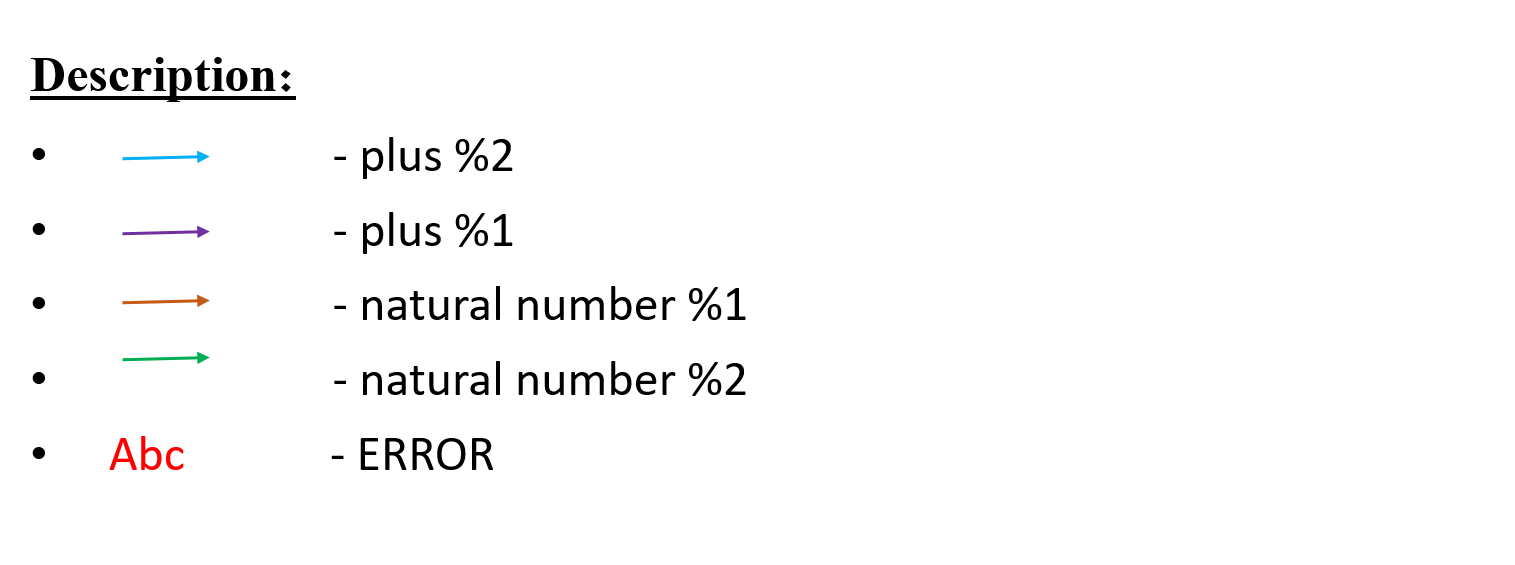
A= g([T])

B=g(T)

**Q.5**

**a.**

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**b. answer**:

{X\_1=s(s(zero)), Y\_1=X, Z\_1=s(s(s(zero)))} ○ {X\_2=s(s(zero)), s(Y\_2) =X, Z\_2=s(s(zero))} ○ {X\_3=s(s(zero)), Y\_3=zero} ○ {X\_4=s(zero)} ○ {X\_5=zero}

=> {X\_1=s(s(zero)), X=Y\_1, Z\_1=s(s(s(zero))), X\_2=s(s(zero)), Y\_2=zero, s(zero)=X, Z\_2=s(s(zero)), X\_3=s(s(zero)), X\_4=s(zero) , X\_5=zero}

**c.** The tree is a Success-tree, because there is a success path and a success leaf.

**d.** The proof tree in finite, because all his branches are finite (⬄ all paths are

finite – end with FAIL or SUCCES).