**Answer:** **(B)**   
  
**Explanation:** This question can be solved by first change of variable and then Master Method.

Let n = 2^m

T(2^m) = T(2^(m/2)) + 1

Let T(2^m) = S(m)

S(m) = 2S(m/2) + 1

Above expression is a binary tree traversal recursion whose time complexity is (m). You can also prove using [Master theorem](http://en.wikipedia.org/wiki/Master_theorem#cite_note-dartmouth-2).

S(m) = (m)

= (logn) /\* Since n = 2^m \*/

Now, let us go back to the original recursive function T(n)

T(n) = T(2^m) = S(m)

= (Logn)