Module-19

∴ Activity-3 :-

a) floor(q)

   E
     ⟍q
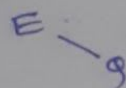
Node x = floor(E, q)

   cmp will be 0

   so, return x;

∴ q will be returned.

b) Select(5)

   it will return the value that
   is present at index s after sorting
   the given tree.

                                    E
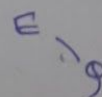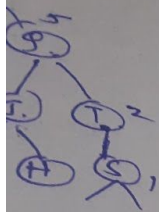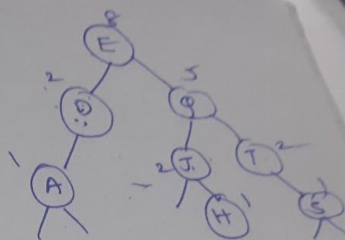   ⟍q

c) ceiling(q)

   Node x = ceiling(E, q)

   • cmp > 0

     ceiling(·q, q)

       cmp = 0

        will be returned.

   so, q

d) rank (J)

No. of smaller elements
than J.

i.e A, D, E

$= 3$

e) size (D, T)

rank of D = 1

rank of T = 7

$= rank(hi) - rank(lo) + 1$

$= 7 - 1 + 1 = 7$

f) keys (D, T)

D E J M Q S T