Insertion Sequence:8, 5, 3, 7, 1, 6.

a) Inserting: 8,5,3,7. ( Place available, thus insert)

j =1

j =1

i = 1

7(1100 0111…)

3(1001 1001…)

5(0100 0101...)

8(0000 0001…)

1

0

b) Inserting: 1 (Overflow and j = i, thus expand directory)

j =2

8(0000 0001…)

i = 2

j =2

j =1

1(0101 0101...)

7(1100 0111…)

3(1001 1001…)

5(0100 0101...)

11

10

01

00

c) Inserting: 6 (Overflow and j < i, thus splitting bucket)

j =2

8(0000 0001…)

j =2

7(1100 0111…)

i = 2

j =2

j =2

1(0101 0101...)

6(1000 0110…))

3(1001 1001…)

5(0100 0101...)

11

10

01

00