

Tutorial and Assignment Sheet – ODD 2022

15B11CI311 – Data Structures

Week 6 (19 Sep-24 Sep, 2022)

Q.1. Given an array $Arr[] = (54, 26, 93, 17, 77, 31, 44, 55, 20)$, write the steps to arrange the array keys in a hash table of size 11. Use Linear probing for collision resolution.

Q.2 In a hash table of size 13 which index positions would the following two keys map to?

27, 130

A. 1, 10 B. 13, 0 C. 1, 0 D. 2, 3

Q.3. Suppose you are given the following set of keys to insert into a hash table that holds exactly 11 values: 113, 117, 97, 100, 114, 108, 116, 105, 99. Which of the following best demonstrates the contents of the hash table after all the keys have been inserted using linear probing?

A. 100, __, __, 113, 114, 105, 116, 117, 97, 108, 99

B. 99, 100, __, 113, 114, __, 116, 117, 105, 97, 108

C. 100, 113, 117, 97, 14, 108, 116, 105, 99, __, __

D. 117, 114, 108, 116, 105, 99, __, __, 97, 100, 113

Q.4. What is following function doing

```
int fxn(String Key)
{
    int h;
    h = 2 * Key[0] + Key[1] + 3 * Key[2];
    return (h mod 6);
}
```

Q.5. Perform following operations where I-> Insert, S-> Search, D->Delete in a hash table of size 10 and linear probing for handling collisions

I(4), I(5), I(15), I(20), S(25), I(10), I(44), I(35), I(89), I(85), D(89), I(19), D(35)