

DATA STRUCTURES

BATCH – B

[MONDAY MARCH 3, 2020: 3:00 PM – 6:00 PM]

ASSIGNMENT – 6

CODE: assign06

INSTRUCTIONS:

[Total Marks: 20]

- i) Read all assignments and each problem has to be answered in the same c file.
- ii) Create a .c file following the file name convention: `abc-assign06.c`
Where `abc` is your roll number and `assign06` is the assignment code

PROBLEMS:

1) [Marks: 10 marks]

Construct a Hash table which can store the data as follows:

`(12, 10) ; (122, 4) ; (82, 5)`

The first part denotes the 'x' and next part is the data to be stored.

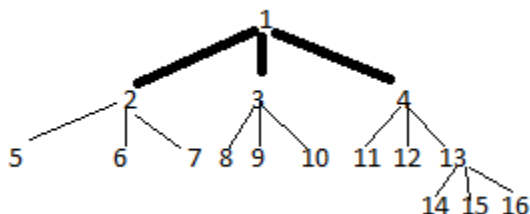
Hash function= $(x+i^2) \bmod 10$

- i) Display the contents in hash table by traversing the hashArray.
- ii) Delete element with `x=122`;
- iii) Search an element with 'x'=38 and 'x'=12.

Write separate functions for each of these tasks `display()`, `insert()` and `search()`.

2) [Marks: 10 marks]

Given a ternary tree as follows:



Print it in vertical order using hashmap with chaining.