**Chapter 16**

**Short Answer Q**

1. **What is the difference between a set and a map?**

A set stores elements. A map stores associations between keys and values.

1. **Why is the collection of the keys of a map a set?**

The ordering does not matter, and you cannot have duplicates.

1. **Hashing is** **?**

can be used to find elements in a data structure quickly without making a linear search .

1. **A hash function is ?**

computes an integer value (called the **hash code**) from an object .

1. **To compute the hash code of object x: ?**
2. **The Difference between Balanced tree and unbalanced tree ?**
3. **What is the difference between a tree, a binary tree, and a balanced binary tree?**

In a tree, each node can have any number of children. In a binary tree, a node has at most two children. In a balanced binary tree, all nodes have approximately as many descendants to the left as to the right.

1. **A priority queue is ?**

collects elements, each of which has a priority

**Ex** : Collection of work requests, some of which may be more urgent than others

When removing an element, element with highest priority is retrieved .

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1. **Differences of a Heap with a Binary Search Tree ?**