3rd Sessional

4th Semester / Comp. Engg.
Subject : Data Structures using C

Section - A

Ans-2   Searching :
                Searching is a process of finding important chunks of data to from all the data available. for example. Searching the number 62 from an array, $a[5] = (61, 62, 63, 64, 65)$.

Some searching methods are -
- Sequential Search or linear Search
- Binary Search

Ans-1

Similar Binary Tree :
                Th Whenever two Binary trees are of same length and same number of nodes then those trees are known as similar binary tree.

Copies of Binary Tree :
                Two binary trees are called copies of binary tree when they have exact same structure and same linear hierachical order and nonds.

Ans 4 four commonly used sorting technique are:

i) Selection Sort

ii) Quick Sort

iii) Heap Sort

iv) Tournament

v) Merge Sort

Ans-5 Traversing of a Tree -

It is the process of visiting or reviewing the subtrees and root of a tree. is

Tree Traversal room bt of three types:

i) Preorder Traversal

ii) Inorder Traversal

iii) Post order Traversal

Ans-6 Sorting:

Sorting is a process of arranging keys in ascending or descending order from a set of data.

*Sorting is of different types, like:

• Quick Sort   • Merge Sort

• Selection Sort   • Tournament Sort

• Insertion Sort   • Heap Sort

• etc.

Section - B

Ans-3
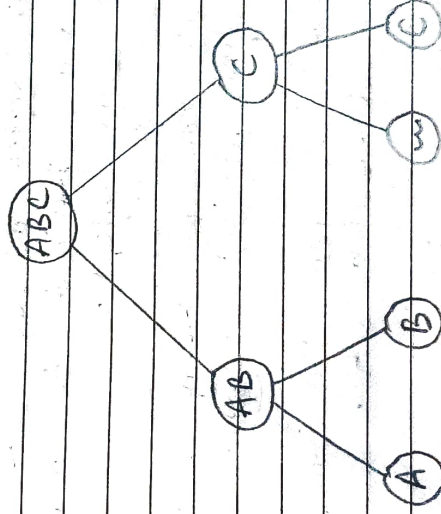
BINARY SEARCH TREE :

Binary search tree is a binary tree in which there are two ways, either you go to left subtree or the right subtree.

By using this, we can-solve many problems.

EXAMPLE -

In the given example, the binary search tree is used. It seems to be a binary tree but it is a binary search tree. It consist of a set

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used sorting techniques

Tree -
It is the process of the subtrees and root
is
...t of three types:

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...is a process of arranging an descending order data.

different types, like :
• Merge Sort
• Tournament Sort
• Heap Sort

(4)

ABC in the root node.

If we want to search for A (data)
during this then first we go to
the root node (ABC) and then to
the left subtree which contain AB
and the into AB we will find
A there.

⇒ The operations associated with binary
search tree are :

a) Creating: The first is creating a binary search
tree. To create a binary seach tree
we use a function called INSERT
insert it enables a new node with
the data value provided to it, followed
by the remaining steps.

b) Searching: We can use binary search tree
to search for required items.

c) Deletion: We can use this to delete
some data from data set.

d) Insertion: We can insert new data into
a new node by using binary seach
tree.