313306

Seat No.

Instructions – (1) All Questions are *Compulsory*.

(2) Answer each next main Question on a new page.

(3) Illustrate your answer with neat sketches wherever necessary.

(4) Assume suitable data, if necessary.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any FIVE of the following:** **10**

a) List operator in Python.

b) Define Dictionaries in Python.

c) Write a syntax to renaming module.

d) Enlist any four types of Inheritance.

e) Define Linear and Non Linear data structure.

f) Write an algorithm for Preorder traversal.

Marks

2.   **Attempt any THREE of the following:**   **12**

     a)   Draw a binary search tree with the help of following elements 49, 63, 22, 18, 90, 65, 12, 33.

     b)   Difference between Array and List.

     c)   Describe the concept of data hiding in Python.

     d)   Explain creating and initializing array using standard numpy method.

3.   **Attempt any THREE of the following:**   **12**

     a)   Describe any four built in function in Python with example.

     b)   State and explain relational operator.

     c)   Explain linear search in Python.

     d)   Describe Modules in Python with eg.

4.   **Attempt any THREE of the following:**   **12**

     a)   Enlist Data types in Python. Describe any two with eg.

     b)   For the given tree write inorder, preorder and postorder traversal.
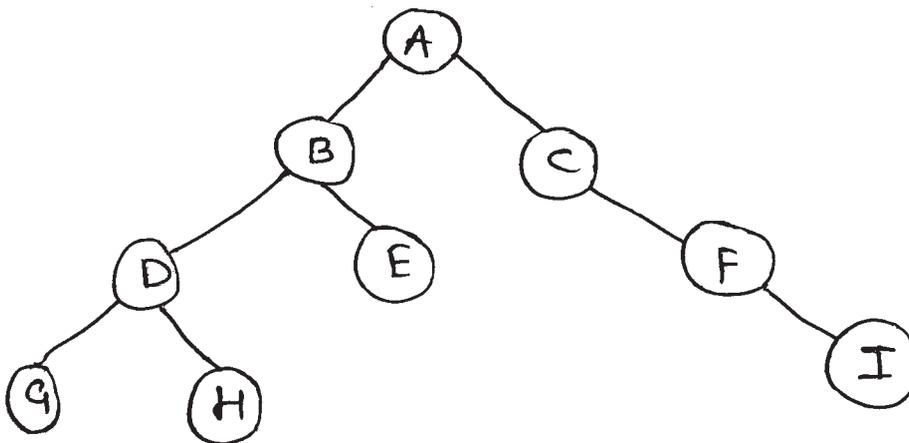
Fig. No. 1

     c)   Describe sorting with eg.

     d)   Explain method overloading with eg.

     e)   Describe define and creating a sets in Python.

Marks

5. **Attempt any TWO of the following:** 12

a) Develop a program to display addition and subtraction of two no.

b) Write a program to deleting and update values in Tuple.

c) Implement a program for Importing modules for multiplication and division of two no.

6. **Attempt any TWO of the following:** 12

a) Develop a program for single inheritance.

b) Explain BFS (Breadth first search and Depth first Search) DFS algorithm with example.

c) Explain Binary tree traversal algorithm with example.

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