DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
II Year B.E (CSE)

Subject Code & Name : 19ITT201 & Data Structures
Semester: III

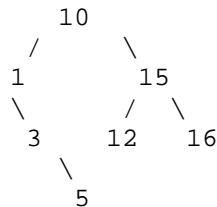### Puzzles

1. The following numbers are inserted into an empty binary search tree in the given order: 10, 1, 3, 5, 15, 12, 16. What is the height of the binary search tree (the height is the maximum distance of a leaf node from the root)?
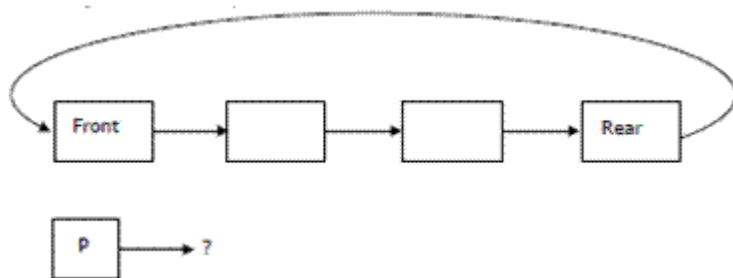a) 2
b) 3
c) 4
d) 6

Answer(b)
Constructed binary search tree will be..

```
        10
       /    \
      1      15
       \    /  \
        3  12   16
         \
          5
```

2. A circularly linked list is used to represent a Queue. A single variable p is used to access the Queue. To which node should p point such that both the operations enQueue and deQueue can be performed in constant time?

a) rear node
b) front node

c) not possible with a single pointer

d) node next to front

Answer(a)

Answer is not "(b) front node", as we cannot get rear from front in O(1), but if p is rear we can implement both enQueue and deQueue in O(1) because from rear we can get front in O(1). Below are sample functions. Note that these functions are just sample are not working. Code to handle base cases is missing.

3) Which data structure uses this concept?

4) Guess this Application where the concept of stack is used.
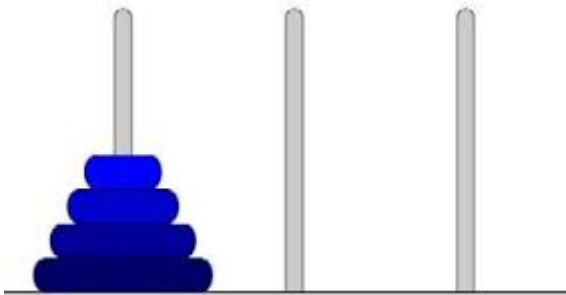
6) This is a hierarchal representation.

7) Node without children's
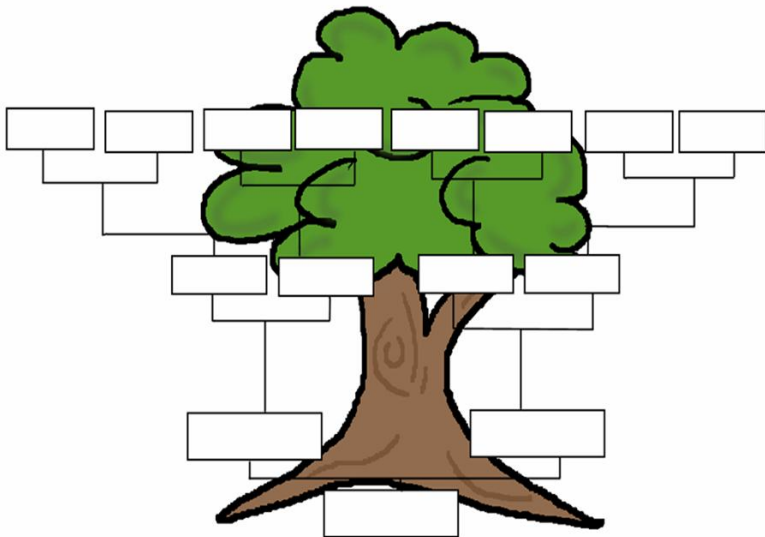

8) I don't have any predecessor.

9) Guess the technical term

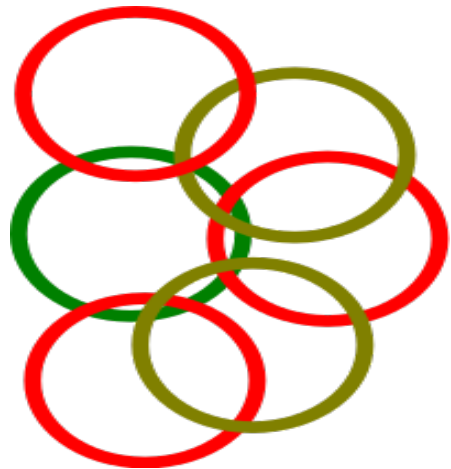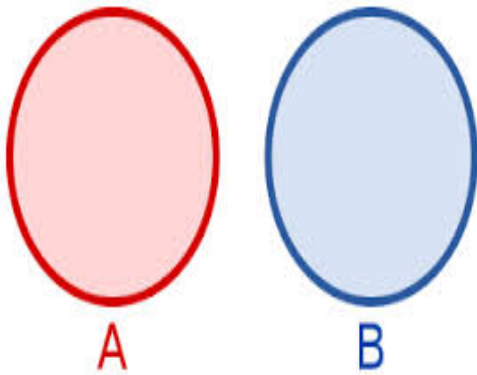10) All leaves are at the same level and every interior node has two children.
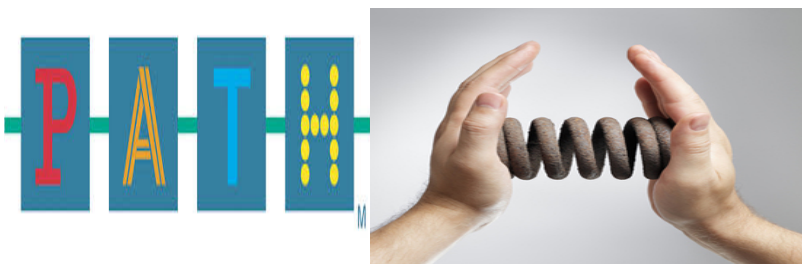

11) Method to resolve collision in hashing

12) Find the representation
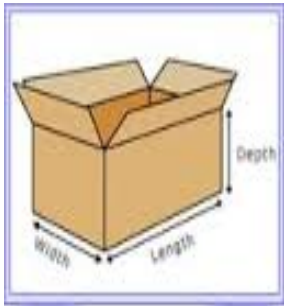

13) Identify the technique

14) All the smaller elements are moving to top

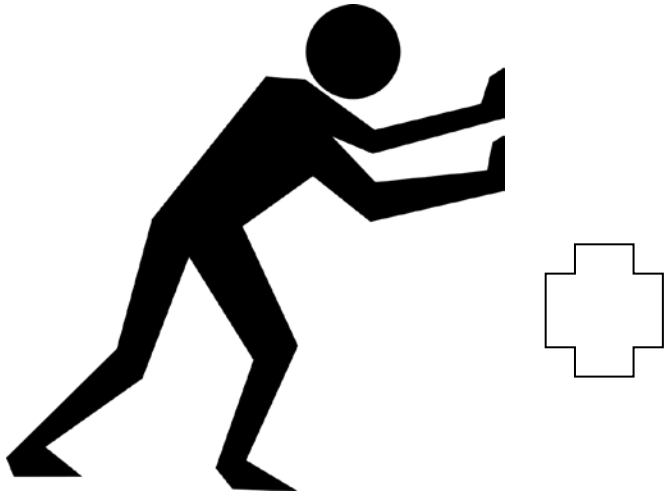15) Please help me to Place the element in right position.

16) Do You Know!!! I am a Kind of graph traversal.

17) Guess What I am doing?

18). There is no separate start and separate end for me.