PRACTICE QUESTIONS

**Note: Write the complete code in one place neatly. Commenting the code is optional.**

## Section – A

Three questions of 02 marks each (with no internal choice). 3 x 2 = 6 Marks

I. Assume a singly-linked list of integers containing 'n' nodes 5, 10, 7, 30, … n and referenced by head.

a) First, define your node class, then 1 mark

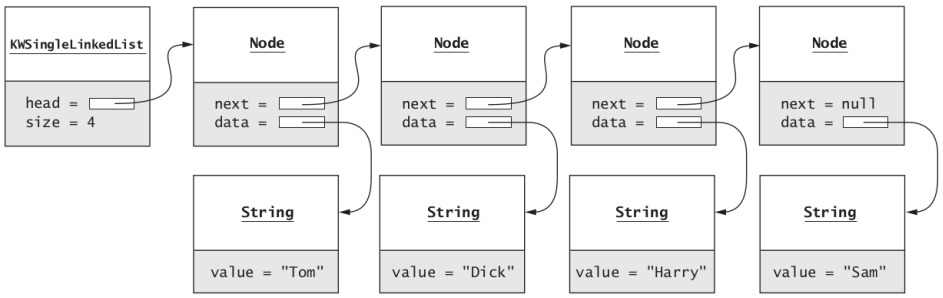
b) Complete the following fragment, which adds all integers in a list. Your fragment should walk down the list, adding all integer values to sum. 1 mark

```
int sum = 0;
Node nodeRef = ____;
while (nodeRef != null) {
   sum += ____;
   nodeRef = ____;
         }
```

II. Given a linked list of integers containing N nodes, complete the method public void deleteOddDataNode() that deletes nodes that contain odd integer data.

```
class Node {
   int data;
   Node next;
}
class MyLinkedList {
   Node head;
   public void deleteOddDataNode() {
      //write your code here
   }
}
```

III. For the singly-linked list in figure, data field head (type Node) references the first node. Write the output and explain the effect of each statement in the following fragments.




```
public class Node { //   class Node begins
     private String data;
     private Node next;
     public Node(String data, Node next) {
          this.data = data;
          this.next = next;
     }
     public Node(String data) {
          this.data = data;
          this.next = null;
     }
     public String getData() {
          return data;
     }
     public void setData(String data) {
          this.data = data;
     }
     public Node getNext() {
          return next;
     }

     public void setNext(Node next) {
          this.next = next;
     }
} // Node class ends
```

I. Explain the output, head = new Node("Shakira", head.getNext());

II. Explain

Node nodeRef = head.getNext();

nodeRef.setNext( nodeRef.getNext().getNext());

## Section – B

Three questions of 03 marks each (with no internal choice). 3 x 3 = 9 Marks

I. Write a program to input an N digit number. Now break this number into its individual digits and then store every single digit in a separate node, to form a queue of numbers using singly linked list.

For example, if you entered 12345 there will be 5 nodes in the list containing nodes with values 1, 2, 3,4, 5

Write a display function also to print the output in the following format

1 == > 2 ==> 3 ==> 4 ==> 5

II. Created Doubly linked list to store the details of employees in a department. Linked list will contain 5 nodes, print all the information stored in the list.

```
//employee class begins
class Employee{
        private String name;
        private int empid;
        private int salary;
        //complete employee class
        // by creating  getter and setter for employee
}
```