



United International University
Department of Computer Science and Engineering
CSE 2215 Data Structures and Algorithms(Sec BD),
Class Test 2, Summer 2024
Total Marks: 20, Time: 30 minutes

1. What does the following function return for the given Single Linked List with the first node as head and key=12? Explain your result. [6]

14 -> 63 -> 47 -> 31 -> 78 -> 12 -> 9

```
def fun(self, key):  
    temp = self.head  
    var = 0;  
    while temp != None:  
        if temp.data == key:  
            return var  
        var = var+1;  
        temp = temp.next  
    return -1;
```

2. Given a single linked list and the first node denoted as head, write a function to create a new node with the value equal to the square of the first element and insert it at the end of the linked list. [7]
3. Given a double linked list and the first node denoted as head, write a function to delete the element at the second last position of the linked list. [7]