NATIONAL UNIVERSITY
OF COMPUTER & EMERGING SCIENCES
LAHORE

Course: Data Structures  Answer Sheet No: 30493
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23/25

Q-3

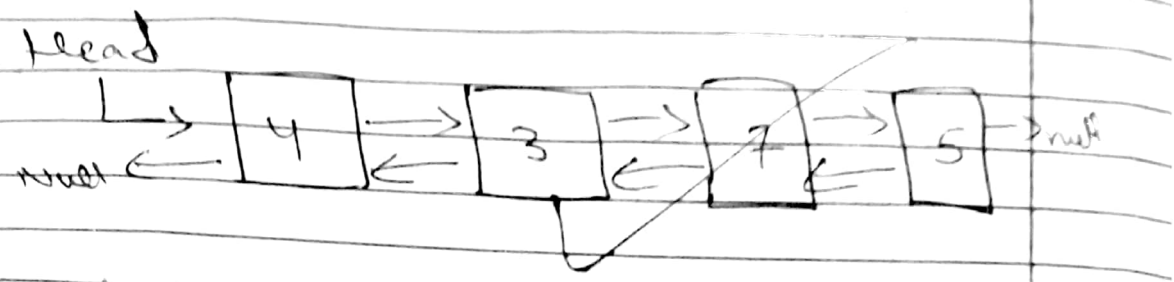
```
bool changeHead (int pos)
{
    if (head == nullptr)
    { return false; }

    else
    {
        for (int i=0; i<pos-1; i++)
        {
            Node *p = head;
            while (p->next->next!=nullptr)
            {
                p = p->next;
            }
            Node * q = p->next;
            q->next = head;
            p->next = nullptr;
            head = q;
        }
        return true;
    }
}
```

9/10

Q / Part No.

Rough Work

Q-4




The linklist will be reversed after the function call foo.

4/5

Q-1

```
int x=0;

for(      i<N  i++) { n
    for( j=1 , j<=100; j++) { n
        for (i=0 k=j, k<N; k++) n
        {
            x = x+i+j+k;
        }   c c c
    }
}
```

So

$T(n) = n \times n \times 100 + c + c + c$

$= 100n^2 + c$

or

$T(n) = n \times n \times n + c + c + c$

$= n^3 + c$

Q / Part No.

Rough Work

4/5

Big-O is $O(n^2)$ for smaller inputs of n

and $O(n^3)$ for larger inputs of n.

Q-2

```
function (str){
// Determining form
str = "abc&cba"
A = 'abc'
B = 'cba'

if(size of A != size of B)
{return false;}

else
{i = 0;
while(str[i] != '&') // is not equal to
{
    pushonstack(A[i]),
    i++;
}
k = 0;
while(i is less than size of str)
{
    if(B[k] != popstack())
    {return false;}
k++; i++;}
}return true;}
```