CSE 220 - Final

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Section : 11

Ans. To The Q. No. 1

```
def firstfunctionSum (arr, index1, index2):
    if index1 >= len(arr):
        return
    else:
        def list(arr nested):
            if index2 >= len(arr[index]):
                return
            else:
                return arr[index1][index2]
                    + list(index2+1)
        return list(arr[index1]) + firstfunction
                                   sum
                firstfunctionsum(arr, index+
                                 index2)
```

Print ("Here, the summation of all the numbers is

Print (firstfunctionSum([[15, 18], [9, 17]])

Ans. To the Q No. 2

Array: [De@45, ce$58, Jy#23, uA%19, L28z9]

i) De@45

Sum = 338

Product = 4 × 5 = 20 ; index = (338 − 20) % 20
= 2

ii) ce$45

Sum = 313

product = 5 × 8 = 40

index = (313 − 40) % 40

= 3

iii) JJ#23

Sum: 331

Product = 2 x 3 = 6

Index : (331 - 6) % 6 = 0

iv) cA 1.19

Sum: 325 product = 9

index = 1

v) L2&2q

Sum: 332 product: 2 x 2

Index = 3

So, Hashtable :

['JJ#23', 'cA 1.19', 'L2&2q', 'De@45', 'Ce5']

Ans) To the Q) NO 2

```
def search(A, Aux, key):
    index = hash(key)
    i = 0
    while(i != len(Aux)):
        if Aux[index] == key:
            return True
        if index > len(Aux):
            index = index%(len(Aux)
    i += 1
    return false
```

Ans. To The Q. No 3 (a)(i)

Z → K → S

K → L → O

L → M → N → O

M → N

N → O → P → R

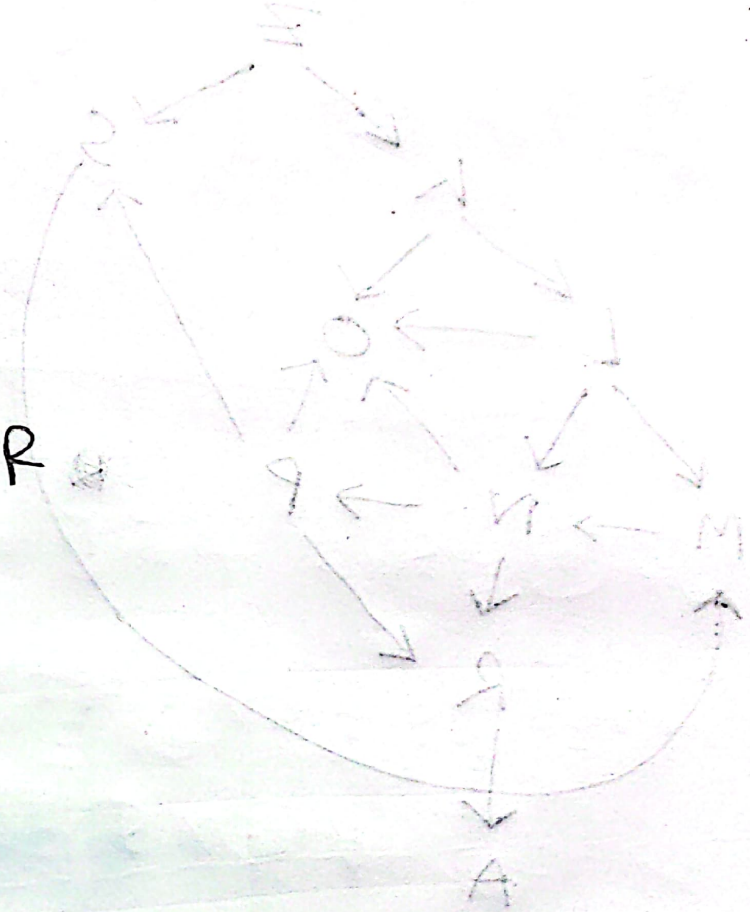
O →

P → O → S → R

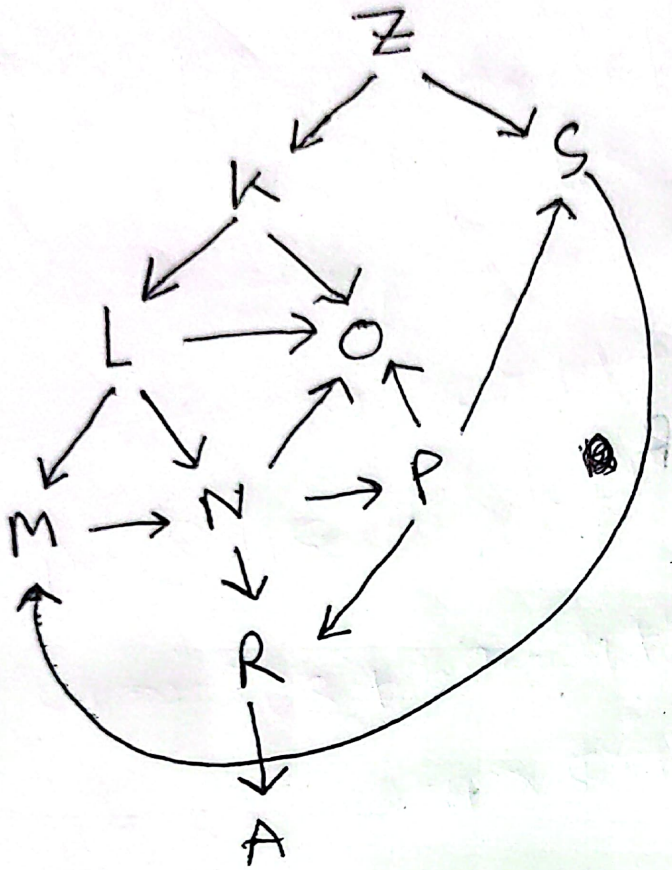
S → M

R → A

A →



3 (a)(ii)



a(iii)

Vertex	in	out
Z	0	2
K	1	2
L	1	3
M	2	1
N		

O	4	0
P	1	3
S	2	1
R	2	1
A	1	0

(b) (1)

A = [null, Z, K, M, null, L, O, P, null, null, S, null,

0	1	2	3	4	5	6	7	8	9	10	11

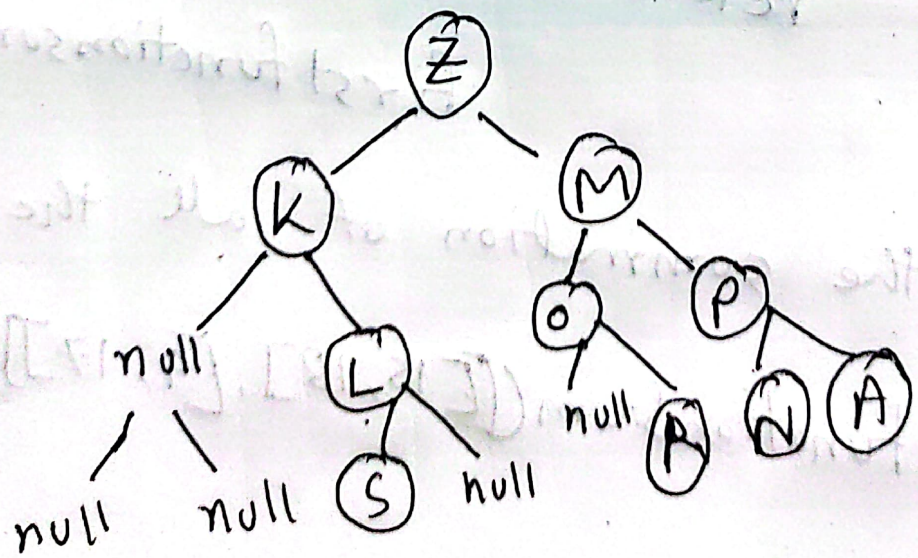
null, R, N, A]

12	13	14	15

if parent = i

left = 2i

right = 2i + 1



b(ii)

pre-order - Z, K, L, S, M, O, R, P, N, A

in-order - S, L, K, Z, O, R, M, N, P, A

b(iii)