

PYTHON ASSIGNMENT - 7

Question 1 –

```
# Question A
n = 5 # Number of rows
for i in range(1, n + 1):
    print(" " * (n - i) + "*" * i)
for i in range(n - 1, 0, -1):
    print(" " * (n - i) + "*" * i)
```

Question 2 –

```
# Question B

for i in range(1,6):
    for j in range(1,i+1):
        print("*",end=" ")
    print()

for i in range(1,5):
    for j in range(1,6-i):
        print("*",end=" ")
    print()
```

Question 3 –

```
# Question C

for i in range(1,6):
    for j in range(1,i+1):
        if j==1 or i==5 or i==j:
            print(j,end=" ")
        else:
            print(" ",end=" ")
    print()
```

Question 4 –

```
# Question D

✓ for i in range(1,6):
✓     for j in range(1,7-i):
        print(" ",end=" ")
        s=i
✓     for j in range(1,i+1):
        print(s,end=" ")
        s+=1

        k = s-2
✓     for j in range(2,i+1):
        print(k,end=" ")
        k -= 1
    print()
```

Question 5 –

```
# Pattern (e)
for i in range(1,6):
    for j in range(1,7-i):
        print(" ",end=" ")

    for j in range(1,i+1):
        if j==1 or i==j or i==5:
            print(" ",j,end=" ")
        else:
            print("  ",end=" ")
    print()
```

Question 6 –

```
# Pattern (h)
✓ for i in range(1,6):
    s=i
    ✓ for j in range(1,7-i):
        ✓ if i==1 or j==1 or j==6-i:
            print(s,end=" ")
            s+=1
        ✓ else:
            print(" ",end=" ")
            s+=1
    print()
```

Question 7 –

```
# Pattern (i)
for i in range(1,6):
    for j in range(1,7-i):
        print(" ",end=" ")

    for j in range(1,i+1):
        print(j,end=" ")

    k = j-1
    for j in range(2,i+1):
        print(k,end=" ")
        k -= 1
    print()
```

Question 8 –

```
# Pattern (j)
for i in range(1,6):
    for j in range(1,i+1):
        print(j,end=" ")

    for j in range(1,6-i):
        print(" ",end=" ")

    for j in range(1,5-i):
        print(" ",end=" ")

    s=i
    #for j in range(1,i+1):
    if s==5:
        s=4
        for j in range(1,i):
            print(s,end=" ")
            s-=1
    else:
        for j in range(1,i+1):
            print(s,end=" ")
            s-=1
    print()
```