Question1 ➖ Write a program to accept percentage from the user and display the grade according to the following criteria:

Marks	Grade
>90	A
>80 and <=90	B
>=60 and <=80	C
Below 60	D

Solution ➖

```
marks = int(input("Enter your marks"))
 if marks > 90:
   print("your Grade is A ")

elif marks >80 and marks <=90:
    print("your Grade is  B ")

elif marks >=60 and marks <=80:
    print("your Grade is  C")

else :
    print ("your Grade is D")
```

Question2 ➖ Write a program to accept the cost price of a bike and display the road tax to be paid according to the following criteria:

Tax	Cost price (in Rs)
15%	>100000
10%	>50000 and <= 100000
5%	<=50000

Solution ➖

```
 price = int(input("Enter your price"))
 if price > 100000:
     print("Tax is 15%")
elif price >50000 and price <= 100000:
    print("Tax is 10%")
elif price <= 50000:
    print("Tax is 5%")
```

Question3 ➖ Accept any city from the user and display monuments of that city.

City	Monument
Delhi	Red Fort
Agra	Taj Mahal
Jaipur	Jal Mahal

Solution ➖

```
 city = str(input("Enter City Name"))
 if city.upper() == "DELHI":
     print("red fort ")

 elif city.upper() ==  "AGRA":
     print("taj mahal ")

elif city.upper() == "JAIPUR":
    print("jal mahal ")

else:
      print("Invaild ")
```

Question5 ➖ Why and When to use while loop in python give a detailed description with example.

Solution ➖ A while loop is made up of a condition or expression followed by a block of code to run. The condition or expression will de evaluated in a Boolean context. If it turns out to be true, the code within the block will be run.

This repeats until the condition evaluates as false. At this point , program execution will proceed to the first statement after the body of the loop.

As with if statement , a while loop can be specified on one line . if there are multiple statement in the loop body block , they can be separated by semicolons.

Python loops can have an else clause that can be include at the end of loop. The else block of code runs only if the loop . the else block of code runs only if the loop completes without encountering a break statement.

```
i=0
While i< 10:
    print(i)
    I += 1
```

Before the loop begins, i equals 0. The expression on line 2 is i<10,which is true, so the body, the loop will run .
Moving into the loop body ,on line 3, i is printed and then incremented by 1, on line 4, going from 0 to 1 . when the body of the loop finishes processing , the script return to the top to re-evaluate the expression . As it is still True , the body runs again. And 2 is the output .
This process continues until i become 10. Then the expression will test as False and the loop will end.

Question6 ➖ Use nested while loop to print 3 different pattern.

Solution ➖

Nested while Loop 1 :-

```
i=1
while i<=5:
    j=1
    while j<=i:
        print(j,end=" ")
        j=j+1
    print("")
    i=i+1
```

Nested while Loop 2 :-

```
i = 1
While i <=5:
        j = 1
        While j <= 10:
                print(j, end = “ “)
                j  = j +
        I = i +1
        print()
```

Nested while Loop 3 :-

```
i = 1
while i <= 4:
    j = 0
    while j <= 3:
        k = 0
        while k <= 5:
            print (i*j*k, end=" ")
            k +=1
        print()
        j += 1
    print()
    i += 1
```

Question7 ➖ Reverse a while loop to display number from 10 to 1.

Solution ➖

```
number = int (input(“Enter the integer number.”))
revs_number = 0
while (number > 0):
    remainder = number  = number % 10
    rvs_number = (revs_number *10)+remainder
    number = number // 10
print (“the reverse number is: {}”. Format (revs_number))
```

Question8 ➖ Reverse a while loop to display number from 10 to 1.

Solution ➖

```
number = int (input(“Enter the integer number.”))
revs_number = 0
while (number > 0):
    remainder = number  = number % 10
    rvs_number = (revs_number *10)+remainder
    number = number // 10
print (“the reverse number is: {}”. Format (revs_number))
```