Assignment

Marks: 20

1. 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

Ans:

```
 marks=int(input("enter your marks"))
if marks>90:
    print("A")
elif marks>80 and marks<=90:
    print("B")
elif marks>=60 and marks<=80:
    print("C")
else:
    print("D")
```

2. 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

Ans:

```
cost_price=int(input("enter your marks"))

if cost_price>100000:

    tax_paid=cost_price*15/100

elif cost_price>50000 and cost_price<=100000:

    tax_paid=cost_price*10/100

else cost_price<=60:

    tax_paid=cost_price*5/100

print("tax to be paid {}".format(taxt_paid))
```

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

city	monument
delhi	Red fort
agra	Taj mahal
jaipur	Jal mahal

Ans:

```
city=input("Accept any city such as: \n 1.delhi \r 2.agra \r 3.jaipur")

If city=="delhi":

    print("Red Fort")

If city=="agra":

    print("Taj Mahal")

If city=="jaipur":

    print("jal Mahal")
```

4. Check how many times a given number can be divided by 3 before it is less than or equal to 10.

Ans:

```
n=int(input("enter a number")

count=1

if(n%3==0 and n!=10):

    count=count+1

print(count)
```

5. Why and When to Use while Loop in Python give a detailed description with example

Ans: A while loop in python allows a part of the code to be executed repeatedly as long as a given condition is true. The while loop in python is also called a pre-tested loop. It is typically used when the number of iterations is not known.

A python while loop expression condition consists of three parts:

- A piece of code that needs to be repeated over and over
- The while keyword
- A condition that translates to either true or false

6. Use nested while loop to print 3 different patterns.

Ans:

```
n=int(input(“enter a number”))

i = 1

while i <= n :

    j = 1

    while j <= i:

        print("*", end = " ")

        j += 1

    print()
        i += 1
```

7. Reverse a while loop to display numbers from 10 to 1.

Ans:

```
i=10

While i>0:

print(i)

i=i+1
```

8. Reverse a while loop to display numbers from 10 to 1

Ans:

```
 i=10

While i>0:

print(i)

i=i+1
```