# Quiz 1

* **Why is UNIX / Linux preferred over Windows in mission critical softwares**? ( 1 m) \*\*

**Ans**: UNIX/LINUX is preffered over windows in mission critical softwares as it can process large amount of data and complex data more efficiently .That’s the reason it can be found from small watch to large systems that can even fit in a room. Also its free of cost installation makes it more easily available to use.Moreover, the changes made at any point in the system will be reflected to all the systems when working on any critical softwares.

* **Name 2 things that Windows does better than Linux** (2 m ) \*\*

**Ans:**O.S of windows is better and it does not crash easily.

Windows support some applications which are not supported by linux.

* **Name 5 basic variable types in Python. Write down 1 sentence of real life use case of each variable type** ( 5 m) \*\*

**Ans: int,float,char,long,string,longlong**

Int- can store the integers in it. Ex: 1,2,3,4

Float – can store the floating no’s. ex:1.2;3.7;5.8

Char – can store characters in it. ex: a,b,c,@,%

Long- can store words in it . ex :himani,sanjana

String-it is used to store sentences. Ex: “MY NAME IS HIMANI”

Longlong- is used to store the words too.But can store more bytes than long.

* **Name 3 basic mathematical operators in Programming language** (1 m)
* **Ans: Add (+),subtract (-) ,divide(/ or %)**
  + **Write a program to show usage of the said operators using Python** (5 m)
  + a = int(input("enter the first no."))
  + b = int(input("enter the second no."))
  + c = input("enter the value of operator")
  + if (c == '+'):
  + print(a+b)
  + elif(c == '-'):
  + print(a-b)
  + else:
  + print(a/b)
  + print(a%b)
* **What will be the result of the following mathematical operations**: (2 marks)

A = 10

A += 20

Print (A)

Ans: A= A+20 = 10+20=30

A = 20

A -= 10

Print(A)

Ans: A=A-10=20-10=10

* **What will be the result of following membership operators**: (2 m)

A = [1,2,3]

B = 4

Print(B in A)

Ans:[1,2,3,4]

A = [1,2,3]

B = 2

Print(B in A)

Ans:[1,2,3]

* **What will be result of following bitwise operators** (4 m)

A = 8

B = 6

Print(A & B)

0

A = 8

B = 6

Print(A | B )

14

A = 8

B = 6

Print ( A ^ B )

14

A = 8

Print(~A): 7

Print(~B): 9

* **Show proficiency in Decimal to binary conversion** (4 m)
  + 16 =10000
  + 12 = 1100
  + 14 =1110
  + 10=1010
* **Show Binary to decimal conversion** (4 m)
  + 1000 =8
  + 1001=9
  + 1100=12
  + 100000=32
* **Are the following programs syntactically correct i.e. will the program compile ( Hint: Pay close attention to everything )** (2 m)
  + **If not, then rewrite it to make it correct. If its correct, prove why**

Variable\_1 = int(input(“Enter a number”))

If (Variable\_1 > 10)

Print(“Number is greater than 10)

Elif

Print(“Number is smaller than 10 ”)

Else

Print(“Whatever, bye”)

Break

Ans:::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

Variable\_1 = int(input(“Enter a number”))

If (Variable\_1 > 10):

Print(“Number is greater than 10)

Elif(Variable\_1 <10):

Print(“Number is smaller than 10 ”)

Else:

Print(“Whatever, bye”)

Break

* Write a program to do binary to decimal conversion ( 8 m)
  + Hint : a string can be iterated upon JUST like a List. So something like

For variable in “1001”:

Print(variable)

Will print “1”, “0”, “0”, “1”

C = input( “enter the result.”)

For variable in “abcdef”:

Print(variable)

C = f\*2\*\*0 +e\*2\*\*1+d\*2\*\*2+c\*2\*\*3+b\*2\*\*4+a\*2\*\*5