Assignment 1

1. a =5
   b =6
   c =a+b

2. [MCQ] Which of the following will produce the right result?
   2 + 5 produces '25'
   '2' + 5 produces '25'
   '2' + '5' produces '25' (Right answer)
   2 + '5' produces '25

3. #Compute the area and perimeter of a circle with radius = 3

pi = 3.14

area =pi*3*3

perimeter =2*pi*3

4. # Change the type of the variable x to float

Change the type of variable y to integer

x = 123446754336788543835697

y = 3.14159265358979323846

x =float(x)

y =int(y)

5. # Assign foobar which gives the output shown in the last example.

Hint: Use the triple quote as the outermost quote

foobar ="""No, thanks, Mom," I said, "I don't know how long it will take."""

6. # Assign 'HelloWorld!' to variable a

a ='HelloWorld!'

b contains 'HelloWorld!HelloWorld!HelloWorld!HelloWorld!HelloWorld!'

b = a*5

7. greeting = "Hello Google!"

number of characters stored in the variable greeting

number_of_char =len(greeting)

repeat the greetings based on the number of character in 'greeting'

greetings =greeting*number_of_char

8. # Write a function, given a string of characters, return the string together with '_'s of the same length.

def underline(title):

    return title + '\n' + len(title) * '_'

9. # Use one or more string methods in above examples, extract the substring

surrounded by 'xyz' at the beginning and end. Replace the ',' in the substring with '|'.

and remove all trailing space.

str1 = 'abcefghxyzThis,is,the,target,string xyzlkdjf'

idx1 = str1.find('xyz') # get the position of 'xyz'

idx2 = str1.find('xyz' , idx1+1) # get the next 'xyz'

str1 = str1[idx1+3:idx2].replace(',','|') # replace ',' with '|'

str1 = str1. strip() # strip trailing spaces.

10. # Assign arbitrary values to the variables such that they are of the types used in the examples

a ='@@@'

b =123

c =123.0

d =[2,3,4,5]

11. [MCQ] Which of the following are not valid variable names in Python?

a: _hello

b: $hello

c: hello

d: hello world

a and b

a only

d only

a and c

b and d (correct answer)

12. # Compute the sum and product of 2 complex numbers:

(2+3j) and (4+5j)

a = 2+3j

b = 4+5j

sum_ab =a+b

prod_ab = a*b

13. # Write a function that does a decimal to hexadecimal conversion.

Hint: Make use of "%x" for hexadecimal format.

def dec2hex(num):

    return "0x%02x"%(num)

14. # Extract each word from 'greetings' and assign to

variables 'first', 'middle' and 'last'.

greetings = "How are you"

first = greetings[0 :3]

```
middle = greetings[4 :7 ]
last   = greetings[8 :11 ]
```

15. a = 25

b = 0o31

c = 0x19

16. [MCQ] What are the final values of x and y at the end of execution?

```
    def changeval(x):
        global y
        x = 3
        y = 4

    x = 1
    y = 2

    changeval(x)

    print x
    print y
```

x = 1, y = 2

x = 3, y = 4

x = 3, y = 2

x = 1, y = 4 (correct answer)

None of the above.

17. [MCQ] What will be printed by the code given below?

```
>>> type(5/2)
```

<type 'int'> (correct answer)

<type 'float'>

<type 'list'>

<type 'str'>

<type 'tuple'>

18. **Question:**

[MCQ] What is the value of x?

```
x = 1 == 1 and 1 != 0 or 1 > 0
```

-1

0

True (correct answer)

False