Chapter 2

A. Multiple Choice Questions

1. c
2. c
3. c
4. d
5. d
6. b
7. c
8. c
9. c
10. d

B. True or False

1. True
2. True
3. False
4. False
5. False
6. True
7. True
8. True
9. False
10. True

C. Exercise Questions

1. Name, Roll_No, DoB are valid identifiers
2.
   a. 2
   b. 102
   c. -1
   d. Z
   e. a
   f. 2
   g. 2
   h. 1
   i. 4.0
   j. 2.718281828459045
   k. Error
   l. Error
   m. -1.0

3.
   a. 97
   b. 70
   c. 102
   d. 'a'
   e. 'd'

4. Variable num1 has string value '10'. Therefor we cannot perform addition of string and integer value. The bug in the code can be fixed as

```
num1 = int('10')
num2 = 20.65
```

```
sum = num1 + num2
print(sum)
```

5.
   a. 10
   b. a
   c. 14
   d. 6b
   e. 24
   f. 1100100
   g. 1010

6.
   a. Hello
   b. Hello
   c. Hello
   d. Hello

7.
   a. 10
   b. 10
   c. 10.76
   d. 10.761214

8. Python's print() function comes with a parameter called '*end*'. By default, the value of this parameter is '\n', i.e. the new line character. However, if you want to display the messages in one line without using a single print statement, then you can invoke the **print** function by passing a special argument named end=' '.

   Example:

```
print('Hello',end = ' ')
print('World')
```

   Output:

```
Hello World
```

9. Program written in Python contains words or statements which follow a sequence of characters. When these characters are submitted to the Python interpreter, they are interpreted or uniquely identified in various contexts, such as characters, identifiers, names or constants. Python uses the following character set:

Letters: Upper case and lower case letters
Digits: 0,1,2,3,4,5,6,7,8,9
Special Symbols: Underscore (_), (,), [,], {,}, +, -, *, &, ^, %, $, #, !, Single quote('), Double quotes("), Back slash(\), Colon(:), and Semi Colon (;)
White Spaces: ('\t\n\x0b\x0c\r'), Space, Tab

10. A complex number is a number that can be expressed in the form **a+bj**, where **a** and **b** are real numbers and **j** is an imaginary unit.

Example of Complex Number on Interactive Mode

```
>>> 2+4j
(2+4j)
>>> type(2+4j)
<class 'complex'>
```

11. 1020

Programing Assignments

1. Write a program to print 'F' to 'A' in five different lines.

```
print('F')
print('E')
print('D')
print('C')
print('B')
print('A')

Output
F
E
D
C
B
A
```

2. Write a program to read and store the name of three different cities in three different variables and print all the contents of variables on the console.

```
city1 = input('Enter the name of City1:')
city2 = input('Enter the name of City2:')
city3 = input('Enter the name of City3:')
print('City 1: ',city1)
print('City 2: ',city2)
print('City 3: ',city3)

Output
Enter the name of City1:Mumbai
Enter the name of City2:Delhi
Enter the name of City3:Banglore
City 1:  Mumbai
City 2:  Delhi
City 3:  Banglore
```

3. Write a program to prompt the user to enter and display their personal details, such as name, address and mobile number.

```
name = input('Enter name:')
address = input('Enter Address:')
mno = input('Enter Mobile Number:')
print(' Name: ',name)
print('Address: ',address)
print('Mobile No:',mno)

Output
Enter name:Bill Gates
Enter Address:California, USA
Enter Mobile Number:07146542709
Name:  Bill Gates
Address:  California, USA
Mobile No: 07146542709
```

4. By making use of five different print statements, write a program to print 'A' to 'F' in one single line.

```
print('F',end=' ')
print('E',end=' ')
print('D',end=' ')
print('C',end=' ')
print('B',end=' ')
print('A',end=' ')

Output
F E D C B A
```

5. Write a program to read an integer as string. Convert the string into integer and display the type of value before and after converting to int.

```
num = input('Please Enter the number:')
print(num, ' and  its type is ',type(num))
num = int(num)
print(num, ' and  its type after converting ',type(num))

Output
Please Enter the number:10
10  and  its type is  <class 'str'>
10  and  its type after converting  <class 'int'>
```

6. Write a program initialize the string "hello world" to a variable Str1 and convert the string into upper case.

```
str1 = "hello world"
str1 = str1.upper()
print(str1)

Output
HELLO WORLD
```

7. Translate the following algorithm into Python code.

Step 1: Initialize variable named Pounds with value 10.
Step 2: Multiply Pounds by 0.45 and assign it to a variable Kilogram.
Step 3: Display the value of variable Pounds and Variable.

```
Pounds = 10
Kilogram = 10 * 0.45
print(' Pounds = ',Pounds)
print(' Kilograms = ',Kilogram)

Output
Pounds =  10
Kilograms =  4.5
```

8. Write a program to read the radius of a circle and print the area of the circle.

```
radius = int(input('Enter the radius of Circle:'))
area = 3.14 * radius * radius
print('area of circle having radius ',radius,' is  ', area)

Output
Enter the radius of Circle:10
area of circle having radius  10  is   314.0
```