**ASSIGNMENT 3**

**Question 1: (1 point)**  
Which of the following is a valid variable name?

* .ram2
* ram.2
* ram\_2
* 2ram00

**Question 2: (1 point)**  
Which of the following statements is invalid?

* m\_n\_q = 3500
* m.n.q = 3500, 3600, 3700
* m,n,q = 3500, 3600, 3700
* mnq = 350036003700

**Question 3: (1 point)**  
Assignment operator used in Python is:

* ==
* >>
* <-
* =

**Question 4: (1 point)**  
Which command would you use to find the data type of a variable?

* data()
* type()
* typeof()
* str()

**Question 5: (1 point)**  
What will be the output after the following statements are executed?

X = 300

Y = 17

X %= Y

print(X)

 11

 17.6

 300

 17

**SET 2**

**Question 1: (1 point)**  
What is the output of the following code?

* 12
* 58
* 70
* Error: Invalid operation, unsupported operator ‘+’ used between 'int' and 'str’

**Question 2: (1 point)**  
Given two variables j = 6 and g = 3.3. If both normal division and floor division operators were used to divide j by g, what would be the data type of the value obtained from the operations?

* int, int
* float, float
* float, int
* int, float

**Question 3: (1 point)**  
Let a = 5 (101 in binary) and b = 3 (011 in binary). Give the operations results in the values 7 and 1 using a and b variables?

**Question 4: (1 point)**  
State whether the given statement is True or False.  
When using the floor division operator (//), if the result is negative, then the result is rounded off to the next largest integer.

* True
* False

**Question 5: (1 point)**  
Let x = "50". Which of the following commands converts the ‘x’ to float datatype?

* str(float, x)
* x.float()
* float(x)
* Cannot convert a string to float datatype

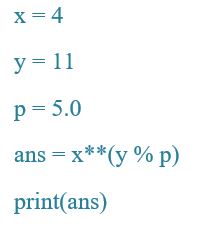
**Question 6: (1 point)**  
Which of the following variable names are INVALID in Python?

* 1\_variable
* variable\_1
* variable\_\*
* variable1

**Question 7: (1 point)**  
Which of the following variable assignments would throw an error?

* var1=True; var2=False;
* var1=false; var2=true;
* var1='True'; var2='False';
* var1='true'; var2='false';

**Question 8: (1 point)**  
Predict the output of the following code



* 4
* 4.0
* 5
* 4.1

**Question 9: (1 point)**  
The value of the variable result after running the code snippet below is \_\_\_\_

* 89.0
* 17.0
* 737.0
* 96.0

**Question 10: (1 point)**  
Which Python library is commonly used for data wrangling and manipulation?

* Numpy
* Pandas
* scikit
* Math

**SET 3**

**Question 1:** Write a program using an if statement that checks if a variable x is positive. If x is positive, the program should print "Positive". Assume x is already defined.

**Question 2:** Create a Python program that uses an if-else statement to check if a variable n is even or odd. Print "Even" if the number is even, and "Odd" if the number is odd. Assume n is already defined.

**Question 3:** Develop a program that uses a for loop to print the first 5 natural numbers.

**Question 4:** Write a simple Python program using a for loop that prints the multiplication table of 2 from 1 to 10.

**Question 5:** Use an if-elif-else structure to write a program that prints "Grade A" if a variable score is greater than 90, "Grade B" if score is between 80 and 90, and "Grade C" if score is below 80. Assume score is already defined.

**Question 6:** Write a Python program with a for loop that counts down from 10 to 1 and then prints "Lift off!".

**Question 7:** Create a program using conditional statements to check whether a variable temperature is above 30. If it is, print "It's hot"; otherwise, print "It's cool". Assume temperature is already defined.

**Question 8:** Write a program using a for loop that calculates the sum of numbers from 1 to 10 and prints the result.

**Question 9:** Develop a Python program that prints "Leap Year" if a given year stored in variable year is a leap year. If not, print "Not a Leap Year". Assume the variable year is already defined.

**Question 10:** Write a for loop in Python that prints all the characters in the string "Hello" on separate lines.