1. Write the following Python statements in interactive mode.

a)
```
print('Your assignment is to read "Hamlet" by tomorrow.')
```

b)
```
room = 503
print('I am staying in room number', room)
```

c)
```
dollars = 99.95
print('I have', dollars, 'in my account!')
```

d)
```
name = 'Kathryn'
last = 'Marino'
age=27
place='Istanbul'
print(age,'years-old',name, last,'lives in',place, sep='.')
```

e)
```
value = 5
print(value ,"multiplied by 2 is:", value * 2)
```

f)
```
s1='Gazi'
s2='Antep'
s3=s1+s2
print(s3)
print(s3*2)
print(3*s3)
```

g)
```
test1= 7 * 2
type(test1)
```

h)
```
test2= 7 * 2 / 10
type(test2)
```

i)
```
test3='Gaziantep'
type(test1)
```

j)
```
help()
keywords
quit
```

2. Write the following Python programs in script mode by using IDLE editor and examine their outputs. You may need to enter some values while running program/s.

a)
```
# Create two variables: time and distance.
time = 2
distance = 230
# Display the values referenced by the variables.
print('Time of travel is',time,'hours')
print('The distance traveled is',distance,'km')
print('Average speed is',distance/time,'km/h')
```

b)
```
# Get the user's name, age, and income.
name = input('What is your name? ')
last = input('What is your last name? ')
age = int(input('What is your age? '))
income = float(input('What is your monthly income? '))
# Display the data.
print('Here is the data you entered:')
print('Name:', name)
print('Last Name:', last)
print('Age:', age)
print('Annual Income:', 12*income)
```

3. <u>TRUE / FALSE QUESTIONS</u>

F _____Programmers must be careful not to make syntax errors when writing pseudocode programs.

T _____In a math expression, multiplication and division take place before addition and subtraction.

F _____If you print a variable that has not been assigned a value, the number 0 will be displayed.

T _____A flowchart is a diagram that graphically depicts the steps that take place in a Computer program.

T _____Programs typically perform three steps: input is received, some process is performed on the input, and output is produced.

F _____In Python, math expressions are always evaluated from left to right, no matter what the operators are.

T _____Comments in Python begin with the # character.

T _____Python allows programmers to break a statement into multiple lines.

4. **COMPLETION QUESTIONS:** Fill in the blanks by using the appropriate words given below.

concatenation	modulus/mod	variable
operands	escape	comments

c) comments are notes of explanation that document lines or sections of a program.

d) The % symbol is the remainder operator, also known as the modulus operator.

e) A(n) escape character is a special character that is preceded with a backslash (\), appearing inside a string literal.

f) In the expression 12.45 + 3.6, the values to the right and left of the + symbol are the operands.

g) When the + operator is used with two strings, it performs string concatenation.

h) A(n) variable is a name that represents a value stored in the computer's memory.

5. **ALGORITHM WORKBENCH QUESTIONS**

a) Write Python code that prompts the user to enter his or her age and assigns the user's input to an integer variable named `age`.

b) Write Python code that prompts the user to enter his or her favorite color and assigns the user's input to a variable named `color`.

MULTIPLE CHOICE QUESTIONS

6. Suppose the following statement is in a program: `price = 99.0`. After this statement executes, the price variable will reference a value of which data type?

a) `int`
b) `float`
c) `currency`
d) `str`

7. Which built-in function can be used to convert an **int** value to a **float**?

a) `int_to_float()`
b) `float()`
c) `convert()`
d) `int()`

8. Which of the following statements will cause an error?

a) `x = 17`
b) `17 = x`
c) `x = 99999`
d) `x = '17'`

9. This operator performs integer division.

a) `//`
b) `%`
c) `**`
d) `/`

10. A(n) _____ is a set of well-defined logical steps that must be taken to perform a task.

a) logarithm
b) plan of action
c) logic schedule
d) algorithm

11. Which mathematical operator is used to raise 5 to the second power in Python?

a) `/`
b) `**`
c) `^`
d) `~`

12. In a print statement, you can set the _____ argument to a space or empty string to stop the output from advancing to a new line.

a) stop
b) end
c) separator
d) newline

13. After the execution of the following statement, the variable `sold` will reference the numeric literal value as (n) _____ data type.

```
sold = 256.752
```

a) Int
b) Float
c) Str
d) Currency

14. What is the output of the following print statement?

```
print 'I\'m ready to begin'
```

a) `Im ready to begin`
b) `I\'m ready to begin`
c) `I'm ready to begin`
d) `'I\'m ready to begin'`

15. Which of the following will display `20%`?

a) `print(format(20, '.0%')) <enter>`

b) `print(format(0.2, '.0%')) <enter>`

c) `print(format(0.2 * 100, '.0%')) <enter>`

d) `print(format(0.2, '%')) <enter>`

16. After the execution of the following statement, the variable price will reference the value _____.

```
price = int(68.549)
```

a) `68`

b) `69`

c) `68.55`

d) `68.6`

PROGRAMS

17. Write a program that asks the user for the number of males and the number of females registered in a class. The program should display the percentage of males and females in the class.

Hint: *Suppose there are 8 males and 12 females in a class. There are 20 students in the class. The percentage of males can be calculated as 8 ÷ 20 = 0.4, or 40%. The percentage of females can be calculated as 12 ÷ 20 = 0.6, or 60%.*

18. A customer in a store is purchasing five items. Write a program that asks for the price of each item, then displays the subtotal of the sale, the amount of sales tax, and the total. Assume the sales tax is 7 percent. Don't forget to test your program with multiple runs.

19. Assuming there are no accidents or delays, the distance that a car travels down the interstate can be calculated with the following formula:

```
distance = speed x time
```

A car is traveling at 70 miles per hour. Write a program that displays the following:

- The distance the car will travel in 6 hours
- The distance the car will travel in 10 hours
- The distance the car will travel in 15 hours