Assignment : Answer the following questions from chapter 1 of textbook

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Multiple Choice questions from pages 17 & 18 (Highlight correct answer)

1. What is the fundamental question of computer science?

a) How fast can a computer compute?

b) What can be computed?

c) What is the most effective programming language?

d) How much money can a programmer make?

2. An algorithm is like a

a) newspaper b) venus flytrap c) drum d) recipe

3. A problem is intractable when

a) you cannot reverse its solution

b) it involves tractors

c) it has many solutions

d) it is not practical to solve

4. Which of the following is not an example of secondary memory?

a) RAM b) hard drive c) USB flash drive d) CD-Rom

5. Computer languages designed to be used and understood by humans are

a) natural languages

b) high-level computer languages

c) machine languages

d) fetch-execute languages

6. A statement is

a) a translation of machine language

b) a complete computer command

c) a precise description of a problem

d) a section of an algorithm

7. One difference between a compiler and an interpreter is

a) a compiler is a program

b) a compiler is used to translate high-level language into machine language

c) a compiler is no longer needed after a program is translated

d) a compiler processes source code

8. By convention, the statements of a program are often placed in a function called

a) import b) main c) program d) IDLE

9. Which of the following is not true of comments?

a) They make a program more efficient

b) They are intended for human readers

c) They are ignored by Python

d) In Python, they begin with a pound sign (#)

10. The items listed in the parentheses of a function definition are called

a) parentheticals b) scripts c) comments d) parameters

Programming Exercises

1. Start up an interactive Python session and try typing in each of the following commands.

Write down the results you see.

(a) print("Hello, world!")

Hello, world!

(b) print("Hello", "world!")

Hello world!

(c) print(3)

3

(d) print(3.0)

3.0

(e) print(2 + 3)

5

(f) print(2.0 + 3.0)

5.0

(g) print("2" + "3")

23

(h) print("2 + 3 =", 2 + 3)

2+3=5

(i) print(2 \* 3)

6

(j) print(2 \*\* 3)

8

(k) print(2 / 3)

0.6666666666666

Submit program Chaos.py with changes from programming exercises 2 through 5. ( #4 will be override by # 5)

2. Enter and run the Chaos program from Section 1.6. Try it out with various values of input to

see that it functions as described in the chapter.

3. Modify the Chaos program using 2.0 in place of 3.9 as the multiplier in the logistic function.

Your modified line of code should look like this:

x = 2.0 \* x \* (1 - x)

Run the program for various input values and compare the results to those obtained from the

original program. Write a short paragraph describing any differences that you notice in the

behavior of the two versions.

4. Modify the Chaos program so that it prints out 20 values instead of 10.

5. Modify the Chaos program so that the number of values to print is determined by the user.

You will have to add a line near the top of the program to get another value from the user:

n = eval(input("How many numbers should I print? "))

Then you will need to change the loop to use n instead of a specific number.