**Homework #1**

**Q1: A \_\_\_\_\_\_\_\_ has no moving parts and operates faster than a traditional disk drive.** *Solid state drive*

**Q2: A bit that is turned off is represented by the value -1.** *False*

**Q3: A computer is a single device that performs different types of tasks for its users.** False

**Q4: A software developer is the person with the training to design, create, and test computer programs.** True

**Q5: All programs are normally stored in ROM and are loaded into RAM as needed for processing.** True

**Q6: Programs are commonly referred to as** Software

**Q7: The CPU understands instructions written in a binary machine language.** True

**Q8: The \_\_\_\_\_\_\_\_ coding scheme contains a set of 128 numeric codes that are used to represent characters in the computer's memory.** ASCII

**Q9: The disk drive is a secondary storage device that stores data by \_\_\_\_\_\_\_\_ encoding it onto a spinning circular disk.** Magnetically

**Q10: The encoding technique used to store negative numbers in the computer's memory is called** Two’s complement

**Q11: The following is an example of an instruction written in which computer language? *10110000*** Machine language

**Q12: The instruction set for a microprocessor is unique and is typically understood only by the microprocessors of the same brand.** True

**Q13: The main reason to use secondary storage is to hold data for long periods of time, even when the power supply to the computer is turned off.** True

**Q14: The process known as the \_\_\_\_\_\_\_\_ cycle is used by the CPU to execute instructions in a program.** Fetch-decode-execute

**Q15: The smallest storage location in a computer's memory is known as a** Bit

**Q16: What is the decimal value of the following binary number? *10011101*** 157

**Q17: What is the largest value that can be stored in one byte?** 255

**Q18: What type of volatile memory is usually used only for temporary storage while running a program?** RAM

**Q19: Where does a computer store a program and the data that the program is working with while the program is running?** In main memory

**Q20: Which computer language uses short words known as mnemonics for writing programs?** Assembly

**Q21: Which language is referred to as a low-level language?** Assembly language

**Q22: Which of the following is considered to be the world's first programmable electronic computer?** ENIAC

**Q23: Which of the following is not a major component of a typical computer system?** The operating system

**Q24: Which of the following is not a microprocessor manufacturing company?** Dell

**Q25: Which type of error prevents the program from running?** Syntax

**Homework #2**

**Q1: A flowchart is a tool used by programmers to design programs.** True

**Q2: A(n) \_\_\_\_\_\_\_\_ is a diagram that graphically depicts the steps that take place in a program?** *Flowchart*

**Q3: According to the behavior of integer division, when an integer is divided by an integer, the result will be a *float.*** False

**Q4: After the execution of the following statement, the variable price will reference the value \_\_\_\_\_\_\_\_. *price = int(68.549)*** 68

**Q5: After the execution of the following statement, the variable sold will reference the numeric literal value as (n) \_\_\_\_\_\_\_\_ data type. sold = 256.752** Float

**Q6: Comments in Python begin with the # character.** True

**Q7: Computer programs typically perform three steps: input is received, some process is performed on the input, and output in produced.** True

**Q8: In Python, math expressions are always evaluated from left to right, no matter what the operators are.** False

**Q9: In Python, *print* statements written on separate lines do not necessarily output on separate lines.** True

**Q10: 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.** end

**Q11: Python allows programmers to break a statement into multiple lines.**True

**Q12: Python formats all floating-point numbers to two decimal places when outputting with the *print* statement.** False

**Q13: The Python turtle is initially positioned in the \_\_\_\_\_\_\_\_ of a graphics window and it first appears, by default, to be heading \_\_\_\_\_\_\_\_.** Center, east

**Q14: The \_\_\_\_\_\_\_\_ built-in function is used to read a number that has been typed on the keyboard.** Input()

**Q15: The \_\_\_\_\_ function reads a piece of data that has been entered at the keyboard and returns that piece of data, as a string, back to the program.** Input()

**Q16: The line continuation character is a**\

**Q17: To use Python's turtle graphics, you must include which of the following statements in your program?** Import turtle

**Q18: What is the informal language, used by programmers use to create models of programs, that has no syntax rules and is not meant to be compiled or executed?** pseudocode

**Q19: What is the output of the following command, given that value1 = 2.0 and value2 = 12?** 24.0

**Q20: What is the output of the following print statement? *print 'I\'m ready to begin'*** I’m ready to begin

**Q21: What is the output of the following print statement? *print('The path is D:\\sample\\test.')*** The path is D:\sample\test.

**Q22: What symbol is used to mark the beginning and end of a string?** A quote mark (‘’)

**Q23: When using the camelCase naming convention, the first word of the variable name is written in lowercase and the first characters of all subsequent words are written in uppercase.** True

**Q24: Which mathematical operator is used to raise 5 to the second power in Python?** \*\*

**Q25: Which of the following will display 20%?** print(format(0.2, '.0%')) <enter>

**Homework #3**

**Q1: A Boolean variable can reference one of two values which are** *True* or *False*

**Q2: A(n) \_\_\_\_\_\_\_\_ structure is a logical design that controls the order in which a set of statements execute.** Control

**Q3: Expressions that are tested by the if statement are called Boolean expressions.** True

**Q4: In Python the \_\_\_\_\_\_\_\_ symbol is used as the equality operator. ==**

**Q5: In Python the \_\_\_\_\_\_\_\_ symbol is used as the not-equal-to operator. !=**

**Q6: Multiple Boolean expressions can be combined by using a logical operator to create \_\_\_\_\_\_\_\_ expressions.** Compound

**Q7: Nested decision statements are one way to test more than one condition.** True

**Q8: Python allows you to compare strings, but it is not case sensitive.** False

**Q9:** **Python uses the same symbols for the assignment operator as for the equality operator.** False

**Q10: Short -circuit evaluation is only performed with the not operator.** False

**Q11: The Python language is not sensitive to block structuring of code.** False

**Q12: The decision structure that has two possible paths of execution is known as** Dual alternative

**Q13: The if statement causes one or more statements to execute only when a Boolean expression is true.** True

**Q14: The not operator is a unary operator which must be used in a compound expression.** False

**Q15: What does the following expression mean? *x <= y*** x is less than or equal to y

**Q16: What is the result of the following Boolean expression, given that x = 5, y = 3, and z = 8? *x < y or z > x*** True

**Q17: What is the result of the following Boolean expression, given that x = 5, y = 3, and z = 8? *x < y and z > x*** False

**Q18: What is the result of the following Boolean expression, given that x = 5, y = 3, and z= 8? *not (x < y or z > x) and y < z*** False

**Q19: When using the \_\_\_\_\_\_\_\_ logical operator, both subexpressions must be true for the compound expression to be true.** and

**Q20: When using the \_\_\_\_\_\_\_\_ logical operator, one or both of the subexpressions must be true for the compound expression to be true.** or

**Q21: Which logical operators perform short-circuit evaluation?** Or, and

**Q22: Which of the following is the correct if clause to determine whether choice is anything other than 10?** If choice != 10:

**Q23: Which of the following is the correct if clause to determine whether y is in the range 10 through 50, inclusive?** if y >= 10 and y <= 50:

**Q24: Which of the following will determine if the turtle's pen is up and will change it to down if that is the case?**

if not(turtle.isdown()):

turtle.pendown()

**Q25: Which of the following will hide the turtle if it is visible?**

if turtle.isvisible():

turtle.hideturtle()

**Homework #4**

**Q1: A good way to repeatedly perform an operation is to write the statements for the task once and then place the statements in a loop that will repeat as many times as necessary.** True

**Q2: A variable used to keep a running total is called a(n)** accumulator

**Q3: A(n) \_\_\_\_\_\_\_\_ structure is a structure that causes a statement or a set of statements to execute repeatedly.** Repetition

**Q4: Both of the following for clauses would generate the same number of loop iterations. for num in range(4): for num in range(1, 5):** True

**Q5: In Python, a comma-separated sequence of data items that are enclosed in a set of brackets is called** List

**Q6: In Python, an infinite loop usually occurs when the computer accesses an incorrect memory address.** False

**Q7: In Python, the variable in the for clause is referred to as the \_\_\_\_\_ because it is the target of an assignment at the beginning of each loop iteration.** target variable

**Q8: In a flowchart, both the decision structure and the repetition structure use the diamond symbol to represent the condition that is tested.** True

**Q9:** **Reducing duplication of code is one of the advantages of using a loop structure.** True

**Q10: The first line in a while loop is referred to as the condition clause.** False

**Q11: The first operation is called the \_\_\_\_\_\_\_\_ and its purpose is to get the first input value that will be tested by the validation loop.** Priming read

**Q12: The integrity of a program's output is only as good as the integrity of its input. For this reason, the program should discard input that is invalid and prompt the user to enter valid data.** True

**Q13: What are the values that the variable *num* contains through the iterations of the following for loop? for *num* in range(2, 9, 2):** 2, 4, 6, 8

**Q14: What are the values that the variable *num* contains through the iterations of the following for loop? for *num* in range(4):** 0, 1, 2, 3

**Q15: - Q16: What type of loop structure repeats the code a specific number of times?** Count-controlled loop

**Q17: What type of loop structure repeats the code based on the value of Boolean expression?** Condition-controlled loop

**Q18: - Q19: - Q20: - Q21: -**

**Q22: When will the following loop terminate? *while keep\_on\_going != 999:*** when keep\_on\_going refers to a value equal to 999

**Q23: Which of the following is not an augmented assignment operator?** <=

**Q24: Which of the following represents an example to calculate the sum of numbers (that is, an accumulator), given that the number is stored in the variable number and the total is stored in the variable total?** total += number

**Q25: \_\_\_\_\_\_\_\_ is the process of inspecting data that has been input into a program in order to ensure that the data is valid before it is used in a computation.** Input validation