MULTIPLE CHOICE

1. Which is the first step in the program development cycle?
   a. design a program
   b. analyze the problem
   c. code the program
   d. test the program

   ANS: B

2. The rules of usage of a programming language is its:
   a. statements
   b. instructions
   c. syntax
   d. logic

   ANS: C

3. The operation in a computer program that transmits data from an outside source to the program is:
   a. pseudocode
   b. input
   c. a Write statement
   d. a Display statement

   ANS: B

4. Which is not a way to input data into a program?
   a. from a keyboard
   b. from a mouse
   c. from a data file
   d. all of the above are ways to input data into a program

   ANS: D

5. Which of the following is not an acceptable variable name?
   a. One_name
   b. Name_One
   c. l_Name
   d. TheFirstName

   ANS: C
6. Which of the following is not an acceptable variable name?
   a. My Friend
   b. Your_Friend
   c. We_Are_ALL_Friends
   d. all of the above are acceptable variable names

   ANS: A

7. If the variable \texttt{Hours} = 10, what is the value of the variable \texttt{Salary} after the following instruction has been executed: \texttt{Set Salary = Hours * 8}
   a. 10
   b. 8
   c. 80
   d. cannot tell from the information given

   ANS: C

8. What is the value of the variable \texttt{PayDay} after the following statements have been executed:
   
   \begin{verbatim}
   Set Hours = 5
   Set PayDay = 30
   Set PayDay = Hours * 6
   \end{verbatim}

   a. 30
   b. 150
   c. 180
   d. cannot tell from the information given

   ANS: A

9. What is \texttt{22 % 5}?
   a. 4.5
   b. 2
   c. 4
   d. 110

   ANS: B

10. What is \texttt{40 / 4 + 6 * 4 - 2}?
    a. 32
    b. 14
    c. 8
    d. 22

    ANS: A
11. What is \((36 \% 4) + (12 / (3 * 2))\) ?
   a. 8
   b. 0
   c. 11
   d. 2

   ANS: D

12. What are the variables in the following program segment?
   Write “How many candy bars do you want to buy?”
   Input CandyBars
   Set Price = 2
   Set Cost = CandyBars * Price
   Write “You need to pay” , Cost
   a. CandyBars is the only variable
   b. CandyBars and Cost are the variables
   c. Price and Cost are the variables
   d. CandyBars, Price, and Cost are the variables

   ANS: D

13. If \(X = 6\) and \(Y = 2\), what is the value of the following expression:
   \(4 + (3^Y) * (X + 2) / Y\)
   a. 59
   b. 40
   c. 52
   d. 26

   ANS: B

14. Which of the following is not an integer?
   a. 150
   b. 8.0
   c. -386,529
   d. 0

   ANS: B

15. Which of the following has the same value as \(9.8002E-4\) ?
   a. -98002
   b. +98,002
   c. + 0.00098002
   d. - 0.00098

   ANS: C
TRUE/FALSE

1. True/False: The last step in the program development cycle is the “code the program” phase.
ANS: F

2. True/False: A prompt is used in a program to tell the user to enter some data.
ANS: T

3. True/False: A variable is the name for a storage location in the computer’s internal memory.
ANS: T

4. True/False: If \( X = 2 \), the assignment statement \( \text{Set } Y = X + 4 \) will put the value of 6 into both \( X \) and \( Y \).
ANS: F

5. True/False: The expression \( 43 \% 1 = 0 \) is correct.
ANS: T

6. True/False: Computers perform all arithmetic operations in order, from left to right.
ANS: F

7. True/False: If \( X = 4 \) and \( Y = 8 \), then \( Y / X ^ 2 + 3 * X - 1 = 15 \) is correct.
ANS: F

8. True/False: The two types of numeric data allowed in most programming languages are integers and real numbers.
ANS: T

9. True/False: The two types of non-numeric data allowed in most programming languages are character string and alphanumerical data.
ANS: F

10. True/False: When you divide two integers, if the result is not an integer (25 ÷ 3, for example), all computer programs will automatically truncate the fractional part of the result.
ANS: F

11. True/False: All numbers with fractional parts are considered real numbers, in programming.
ANS: T

12. True/False: When a variable is declared, its type should be specified.
ANS: T

13. True/False: Scientific notation is a synonym for exponential notation.
ANS: F

14. True/False: The null string is represented by “”.
ANS: T

15. True/False: To join two strings together the concatenation operator is used.
ANS: T
SHORT ANSWER

1. A way to develop a program before actually writing the code in a specific programming language is to use a general form, written in natural English, called __________.
ANS: pseudocode

2. In the statement \texttt{Set Number = 93}, \texttt{Number} is a(n) __________.
ANS: variable

3. In the statement \texttt{Set Temperature = 32}, the value of 32 has been __________ to the variable \texttt{Temperature}.
ANS: assigned

4. The __________ operator returns the remainder after dividing one number by another.
ANS: modulus

5. Data sent by a program to the screen, a printer, or a file is __________.
ANS: output

6. The type of statement used in this textbook to display messages on the screen is a(n) __________ statement.
ANS: Write

7. Data that consists of words and symbols found in text-based documents is known as __________ __________ data.
ANS: character string

8. Any whole number—positive, negative, or zero—is a(n) __________.
ANS: integer

9. When a variable is first assigned a value, it is said to be __________.
ANS: initialized

10. The statement \texttt{Declare FreezingPoint As Real} will declare a variable named __________ as a(n) __________ type.
ANS: FreezingPoint, Real

11. The number \texttt{14.93E+5} is an example of __________ notation.
ANS: exponential

12. Many programming languages include a string operation called __________.
ANS: concatenation

13. A sequence of characters is __________ __________.
ANS: character string

14. If \texttt{String1 = “Ice”} and \texttt{String2 = “cream”}, then the statement \texttt{Set Yummy = String1 + String2} will result in \texttt{Yummy} having the value of __________.
ANS: Icecream
15. Complete the following statement to declare an integer variable named **Money**: Declare

ANS: Money As Integer