**Test Bank for Prelude to Programming Chapter 1**

**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. | output |
| d. | the keyboard |

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. | M |
| c. | 1\_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 **Hours = 10**, what is the value of the variable **Salary** after the following instruction has been executed: **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 **PayDay** after the following statements have been executed:

 Set Hours = 5

 Set PayDay = 30

 Set PayDay = Hours \* 6

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

ANS: A

9. What is the value of the following expression: **22 % 5?**

|  |  |
| --- | --- |
| a. | 4.5 |
| b. | 2 |
| c. | 4 |
| d. | 110 |

ANS: B

10. What is the value of the following expression: **40 / 4 + 6 \* 4 – 2** ?

|  |  |
| --- | --- |
| a. | 32 |
| b. | 14 |
| c. | 8 |
| d. | 22 |

ANS: A

11. What is the value of the following expression: **(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 is not a legitimate statement?

|  |  |
| --- | --- |
| a. | Set MyVariable= “X” |
| b. | Set MyVariable = 98 |
| c. | Set MyVariable = Lizzy |
| d. | Set MyVariable = 2 \* 64 + 83 |

ANS: C

16. Which of the following is not a floating point number?

|  |  |
| --- | --- |
| a. | 9.78 |
| b. | -10.2 |
| c. | 0 333333333 |
| d. | 2 |

ANS: D

17. What is the output of the following statements, given that the variable Num1 = 3 and the variable Num2 = 5?

 Write “The sum of” + Num1 + “and” + Num2 + “is 8.”

|  |  |
| --- | --- |
| a. | The sum of 3 and 5 is 8. |
| b. | The sum of Num1 and Num2 is 8. |
| c. | The sum of3and5is 8. |
| d. | The sum of 3and5 is 8. |

ANS: C

18. The type of number that cannot be expressed as a fraction because the fractional part would go on for infinity without ever repeating a sequence is:

|  |  |
| --- | --- |
| a. | Floating point |
| b. | Rational |
| c. | Real |
| d. | Irrational |

ANS: D

19. A Boolean variable can have which of the following values:

|  |  |
| --- | --- |
| a. | true |
| b. | false |
| c. | 1 |
| d. | 0 |
| e.  | Any of the above are possible values for a Boolean variable |

ANS: E

20. Which of the following would you use to store a telephone number?

|  |  |
| --- | --- |
| a. | Declare PhoneNumber As String |
| b. | Declare PhoneNumber As Character |
| c. | Declare PhoneNumber As Variable |
| d. | Declare PhoneNumber As Float |

ANS: A

**TRUE/FALSE**

1. True/False: The last step in the program development cycle is to code the program.

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 **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 floating point numbers.

ANS: T

9. True/False: The two types of non-numeric data allowed in most programming languages are character string and alphanumeric 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: A Boolean variable can be used to turn off your computer during the running of a program.

ANS: F

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

ANS: T

13. True/False: The variable name I\_Love\_to\_eat\_pizza is a valid variable name.

ANS: T

14. True/False: A string variable can hold a numeric value but it cannot be used in a mathematical operation.

ANS: T

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

ANS: T

16. True/False: The last operation performed when evaluating the following mathematical expression would be subtraction:

 75 – 16 + 9

ANS: F

18. True/False: The last operation performed when evaluating the following mathematical expression would be division:

 75 / 3 \* 4 – 16% 9

ANS: F

19. True/False: The number 678,983,546 is a floating point number.

ANS: F

20. True/False: The number 3.0 is a floating point number.

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 **Set Number = 93** , **Number** is a(n) \_\_\_\_\_\_\_\_\_\_.

ANS: variable

3. In the statement **Set Temperature = 32** , the value of 32 has been \_\_\_\_\_\_\_\_\_\_ to the variable **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 pseudocode 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 **Declare FreezingPoint As Float** will declare a variable named \_\_\_\_\_\_\_\_\_\_ as a(n) \_\_\_\_\_\_\_\_\_\_ type.

ANS: FreezingPoint, Float

11. Many programming languages include a string operation called \_\_\_\_\_\_\_\_\_\_.

ANS: concatenation

12. A sequence of characters is a(n) \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ .

ANS: character string

13. If **String1 = “Ice”** and **String2 = “cream”** , then the statement **Set Yummy = String1 + String2** will result in **Yummy** having the value of \_\_\_\_\_\_\_\_\_\_.

ANS: Icecream

14. Complete the following statement to declare an integer variable named **Money**: **Declare** \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.

ANS: Money As Integer

15. A \_\_\_\_\_\_\_\_\_\_ variable can only have one of two possible values—true or false.

ANS: boolean