

Test Bank for Prelude to Programming

Chapter 1

MULTIPLE CHOICE

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

ANS: B

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

ANS: C

3. The operation in a computer program that transmits data from an outside source to the program is:
- pseudocode
 - input
 - output
 - the keyboard

ANS: B

4. Which is not a way to input data into a program?
- from a keyboard
 - from a mouse
 - from a data file
 - 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?
- One_name
 - M
 - 1_Name
 - 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 33333333
- 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