Test Bank for Prelude to Programming Chapter 7

MULTIPLE CHOICE

1. Using arguments and corresponding parameters to pass data among program modules is an important feature of modular programming because:

a. it enhances the usefulness of subprograms
b. it makes it easier for different programmers to design and code different subprograms
c. it makes it easier to test and debug a subprogram independently of the main program
d. all of the above are true

ANS: D

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2. Given the following two program statements, identify the parameters.

```
Call DressUp(sandals, turtleneck, jeans)
Subprogram DressUP(shoes, shirt, pants)
```

a. `sandals, turtleneck, jeans`
b. `shoes, shirt, pants`
c. `DressUp(shoes, shirt, pants)`
d. `sandals, turtleneck, jeans, shoes, shirt, pants`

ANS: B

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3. Which of the following statements is an acceptable subprogram header?

a. `Subprogram SalePrice(23)`
b. `Subprogram SalePrice(Price * .8)`
c. `Subprogram SalePrice(Price)`
d. `Subprogram SalePrice(X OR Y)`

ANS: C

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4. Given the following statements, what values will be passed to the parameters (**`sandwich`**, **`side`**, and **`drink`**) of the subprogram named **`Lunch`**?

```
Call Lunch(soda, chips, burger)
Subprogram Lunch(sandwich, side, drink)
```

a. `sandwich = soda, side = chips, drink = burger`
b. `sandwich = soda, side = chips, drink = burger`
c. `sandwich = burger, side = chips, drink = soda`
d. `Lunch = burger with chips and a soda`

ANS: B

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5. Given the following statements, what values will be passed to the parameters of the subprogram named **`Vacation`**?

```
Declare Motel As String
Declare Interstate As Integer
Set Motel = “Dew Drop Inn”
Set Interstate = 95
Call Vacation(Motel, Interstate)
Subprogram Vacation(Lodging: String, Road: String)
```

a. `Lodging = “Dew Drop Inn”, Road = “95”`
b. `Lodging = “Dew Drop Inn”, Road = 95`
c. `Lodging = Motel, Road = Interstate`
d. `This cannot be done, type mismatch`

ANS: D

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6. What is displayed after code corresponding to the following pseudocode is run?

```
Set X = 15
Set Y = 25
Set Z = 20
Call Numbers(Z, Y, X)
Subprogram Numbers(A, B, C)
    Write A, B, C
End Subprogram
```

a.
```
15
25
20
```
b.
```
15
20
25
```
c.
```
20
25
15
```
d.
```
25
20
15
```

ANS: C

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7. What will be displayed after code corresponding to the following pseudocode is run?

```
Main
   Set OldPrice = 100
   Set SalePrice = 70
   Call BigSale(OldPrice, SalePrice)
   Write “A jacket that originally costs $ “, OldPrice
   Write “is on sale today for $ “, SalePrice
End Program
Subprogram BigSale(Cost, Sale As Ref)
   Set Sale = Cost * .80
   Set Cost = Cost + 20
End Subprogram
```

a. A jacket that originally costs $100
   is on sale today for $80
b. A jacket that originally costs $100
   is on sale today for $70
c. A jacket that originally costs $120
   is on sale today for $80
d. A jacket that originally costs $120
   is on sale today for $70

ANS: A

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8. What is wrong with the following program segment?

```
Main
     Declare Apples As Integer
     Set Apples = 4
     Call Snack(Apples)
     Write “You have “, Apples, “apples”
     Write “and “, Oranges, “oranges”
   End Program
   Subprogram Snack(Fruit)
     Declare Oranges As Integer
     Set Oranges = Fruit + 2
   End Subprogram
```

a. you cannot call a subprogram that has only one parameter
b. you cannot declare variables within a subprogram
c. you cannot access a variable that has been declared locally within a subprogram outside that subprogram
d. nothing is wrong with the code segment

ANS: C

---

9. What is the value of **X** in the following expression?

```
Set X = Str(-685.23)
```

a. 685 b. -685 c. “-685.23” d. “685.23”

ANS: C

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10. What is the value of **X** in the following expression, given that **Y = 429**:

```
Set X = Round(Y/8)
```

a. 53 b. 53.75 c. 54 d. this cannot be done

ANS: C

---

11. Given the following pseudocode, identify the line of code that is recursive.

```
1.   Function Sum(N) As Integer
2.   If N = 1 Then
3.        Set Sum = 1
4.   Else
5.        Set Sum = Sum(N – 1) + N
6.   End If
7.   End Function
```

a. Line 1 b. Line 2 c. Line 3 d. Line 5 e. Line 7

ANS: D

---

12. A `Call` statement that passes values to a subprogram contains the subprogram's name and, in parentheses, a list of:

a. parameters
b. arguments
c. variables
d. any of the above

ANS: B

---

13. The part of a program in which a given variable can be referenced is that variable's:

a. value b. scope c. name d. argument

ANS: B

---

14. Given the following program segment, what data is passed from the Main program to the subprogram named Display?

```
Main
     Declare R As Integer
     Set R = 2
     Call Display(R * 6, R + 1, 14)
End Program
Subprogram Display(X, Y, Z)
     Write X, “, “, Z, “, “, Y
End Subprogram
```

a. 2, 2, 14 b. 12, 3, 14
c. 12, 14, 3 d. this cannot be done

ANS: C

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15. Given the following function:

```
Function AddIt(X) As Real
     Set F = X + 15/2
End Function
```

What is displayed when the following statement in the main program is executed?

```
Write F(4)
```

a. 9.5 b. 9 c. 11.5 d. 11

ANS: C

TRUE/FALSE

1. True/False: If a data item which is processed by a subprogram is needed by the main program, its value is imported to the main module.
   ANS: F

2. True/False: A subprogram must always return a value to the program or subprogram that calls it.
   ANS: F

3. True/False: A data flow diagram shows the data imported by and exported from each program module.
   ANS: T

4. True/False: The items listed in parentheses in a **`Call`** statement are known as arguments.
   ANS: T

5. True/False: Parameters, as well as arguments, can be constants, variables, or general expressions.
   ANS: F

6. True/False: Changes to the value of value parameters do not affect the value of the corresponding variables in the calling module.
   ANS: T

7. True/False: When a variable is passed by value, the submodule that variable is passed to will receive the actual storage location where the value of the variable is stored.
   ANS: F

8. True/False: When the value of a variable in a subprogram is unchanged, regardless of how the value of a variable with the same name changes outside the subprogram, that variable is said to have local scope.
   ANS: T

9. True/False: Functions that are program modules, created by the programmer, are called built-in functions.
   ANS: F

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10. True/False: Code for built-in functions is supplied by the programming language in separate modules, often referred to as a library.
ANS: T

11. True/False: A function's name may be assigned a value in the code that defines it.
ANS: T

12. True/False: The value of **`Int(-35.8)`** is **`35.`**
ANS: F

13. True/False: To solve the problem of how to code a repeated multiplication problem, recursion ***must*** be used.
ANS: F

14. True/False: Since **`Abs(-5) = 5`** and **`Int(5.3) = 5`**, these two functions can be used interchangeably.
ANS: F

15. True/False: A built-in function is called by using the function name anywhere in a program where a constant of that type is allowed.
ANS: T

SHORT ANSWER

1. If data in the main program is needed by a subprogram, the value of that data is passed to, or _____ by, the subprogram.
ANS: imported

2. A(n) _____ _____ diagram can be used to keep track of the data passed among the various modules.
ANS: data flow

3. Both data flow diagrams and _____ _____ can be used by programmers to indicate the data imported, processed, and exported from each module.
ANS: IPO (or Input-Process-Output) charts

4. The items appearing in a subprogram header are known as _____.
ANS: parameters

5. When a subprogram is called, the values of the _____ are assigned to corresponding _____.
ANS: arguments, parameters

6. Parameters that can be used to both import data into and export data from a subprogram are _____ parameters.
ANS: reference

7. When a variable is passed by _____ to a submodule, that submodule receives only a copy of that variable.
ANS: value

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8. A variable that is declared outside all program modules, including the main module, has _____ scope.
   ANS: global

9. Programming languages usually supply an assortment of _____ functions
   ANS: built-in

10. The function that converts a(n) _____ to a number is **`Val(S, N)`**.
    ANS: string

11. When a program or subprogram calls itself, this process is known as _____.
    ANS: recursion

12. The function that converts a number, **`X`**, to a corresponding string is the _____ function.
    ANS: Str(X)

13. Programming languages allow the programmer to create his or her own functions which are called _____ _____ functions.
    ANS: user defined

14. If a variable is declared both locally and globally, it is treated as if it were two different variables, and the _____ declaration takes precedence.
    ANS: local

15. The number and type of arguments in a **`Call`** statement must be the same as the _____ and _____ of parameters in the corresponding subprogram header.
    ANS: number, type

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