

VISUAL BASIC SAMPLE TEST ITEMS - UPDATED 10/07/98

** - indicates correct answer

1. Which control(s) allow(s) only one item in a group to be checked?
- a. more than one of the following
 - b. CheckBoxes
 - c. OptionButtons**
 - d. TextBoxes

2. How would you access the element at index 5 in the array A?
- a. A(5)**
 - b. A.5
 - c. A.5()
 - d. A

3. Which operator can be used on strings and numbers?
- a. +**
 - b. -
 - c. *
 - d. /

4. Which is a valid *comment* in Visual BASIC?
- a. more than one of the following**
 - b. REM comment
 - c. /* comment */
 - d. ' comment

5. Which function converts a number to a string?
- a. Convert
 - b. ParseString
 - c. Str**
 - d. ToString

6. How many MsgBoxes will the following loop produce?
- ```
For Index = 0 To 2
 MsgBox Index
Next Index
```
- a. 0
  - b. 1
  - c. 2
  - d. 3\*\*

7. Problems I - V refer to the program segment below.
- |                                   |                       |
|-----------------------------------|-----------------------|
| Let Max = 4                       | {At the start of the  |
| Let Answer = 10                   | program, assume that: |
| For Loup = 0 To Max               | Value(0)=1,           |
| Let Answer = Answer + Value(Loup) | Value(1)=2,           |
| Next Loup                         | Value(2)=3,           |
| MsgBox Answer                     | Value(3)=4,           |
|                                   | Value(4)=5}           |

I. Identify a numeric array.

- a. Answer
- b. Loup
- c. Max
- d. Value()\*\*

II. In order for an error not to occur, how many elements, at least, must that array have?

- a. 0
- b. 4
- c. 5\*\*
- d. 15

III. What value of the variable Answer will be displayed at the end of the program?

- a. 0
- b. 10
- c. 15
- d. 25\*\*

IV. What variable serves as the loop index?

- a. Answer
- b. Loup\*\*
- c. Max
- d. Value()

V. What variable serves as the array subscript?

- a. Answer
- b. Loup\*\*
- c. Max
- d. Value()

8. Problems I - IV below refer to the program segment below.

```
Let Word = "ABCDEFGH"
For Letter = 1 to Len(Word)
 Let What = Mid(Word, Letter, 1)
 Let Times = Asc(What) - 64
 For Number = 1 To Times
 Labell = Labell & What
 Next Number
Next Letter
```

I. Name a string function.

- a. Letter
- b. Mid\*\*
- c. Times
- d. Word

II. Is the character "E" placed in Labell during the run of the program?

- a. No
- b. Sometimes, depending upon time of day
- c. Sometimes, randomly
- e. Yes\*\*

III. How many times is the character "D" placed in Label1?

- a. 0
- b. 4\*\*
- c. 52
- d. 68

IV. Describe the general rule that determines how many times "D" (or any other character) is placed in Label1.

- a. The number of characters that the word has.
- b. The ASCII code of the character being printed ("A"-65 times, "B"-66 times, etc.)
- c. The ordinal value of the character being printed ("A"-once, "B"-twice, "Z"-26 times, etc.)\*\*
- d. No characters are placed in Label1.

9. A top-down approach to programming calls for

- I. Working from the general to the specific
  - II. Postponing minor decisions
  - III. A systematic plan
  - IV. Immediate coding of the problem
- a. I
  - b. IV
  - c. I & III
  - d. I, II, & III\*\*
  - e. All of the above

10. Top-down programming facilitates

- I. implementing a complex problem in stages
  - II. testing of individual modules
  - III. readability
  - IV. maintenance of the program
- a. I
  - b. I & II
  - c. II & III
  - d. I, II, & III
  - e. All of the above\*\*

11. You are required to write a program to find the average of the class grades on an examination. The best thing to do first is

- a. input the data
- b. add the grades
- c. ask for names
- d. write the program
- e. write an algorithm\*\*

12. A loop that averages grades that can range from 60 to 100 begins  
Do While Grade <> 65

A better loop condition to accept the necessary grades is

- a. Do While Grade < 100
- b. Do While Grade > 60
- c. Do While Grade = 60
- d. Do While Grade >= 60\*\*
- e. None of the above

13. The last value displayed by the following program fragment is:

```
Let Twos = 2
Do While Twos < 100
 MsgBox Twos
 Twos = Twos * 2
Loop
Rem Twos Table
```

- a. 100
- b. 128
- c. 64\*\*
- d. 2
- e. none of the above

14. The last value assigned to Twos by the following program fragment is:

```
Let Twos = 2
Do While Twos < 100
 MsgBox Twos
 Twos = Twos * 2
Loop
Rem Twos Table
```

- a. 100
- b. 128\*\*
- c. 64
- d. 2
- e. none of the above

15. When several programmers are involved with one design, which of the following is likely to cause the most problems?

- a. modular programming
- b. top-down design
- c. bottom-up design\*\*
- d. structured programming

16. Questions I - III are based upon a Form A with the following code structure:

```
Private Sub Form_Load()
E
C
E
End Sub
```

```
Public Sub B()
```

```
Public Sub C()
```

```
Public Sub D()
```

```
Public Sub E()
```

```
B
```

```
D
```

```
End Sub
```

I. A variable declared (DIMensioned) in Subprogram B and only in Subprogram B is accessible in

- B only\*\*
- Form\_Load & B
- B & E
- Form\_Load, B & E
- All other parts of the code.

II. A variable declared only in the Global Declarations for Form A is accessible in

- No other part of the code.
- Form\_Load only
- Form\_Load, C, & E
- Form\_Load, B, C, D, & E\*\*

III. Which describes the order in which the subprograms of Form A are called?

- E, C, E
- E, B, D, C, E, B, D\*\*
- B, C, D, E
- E, C, E, B, C, D, E, B, D
- E, B, D, C, E, B, D, B, C, D, E, B, D

17. Use the following variable declarations to determine which assignment statement below is not an appropriate statement.

```
Dim Grade1, Grade2, Code As Integer
Dim Mean As Single
Dim LetterGrade As String
```

Which of the following is an appropriate statement?

- LetterGrade = Mean
- Grade1 = Code + LetterGrade
- Mean = (Grade1 + Grade2) / 2\*\*
- Grade2 = Mean

18. A FUNCTION may be

- referenced in an expression
  - used alone as a statement
  - passed a value
- I only
  - II only
  - III only
  - I & II
  - I & III\*\*

19. Which of the following should not be added to the action of the "Then" in the following program segment?

```
For Index = 2 To Limit
 If MyData(Index) < Max Then MsgBox "FOUND"
Next Index
```

- Index = Index + 1\*\*
- MsgBox MyData(Index)
- Max = Max - 1
- MyData(Index) = 0
- Max = 100

20. Use the following code component of a VB form to answer questions I-V:

```
Dim K As Integer '(General)(Declarations)

Private Sub Form_Load()
Dim N, Total As Integer
N = 2
AddUp N, Total
MsgBox Total
MsgBox N
MsgBox K
MsgBox J
MsgBox I
End Sub

Public Sub AddUp(J, Sum)
Dim I As Integer
K = 2 * J
Sum = 0
For I = 1 To K
 Sum = Sum + I
Next I
End Sub
```

I. The MsgBox Total statement will display

- a. 4
- b. 10\*\*
- c. 2
- d. 0
- e. 3

II. The MsgBox N statement will display

- a. 4
- b. 2\*\*
- c. 10
- d. 1
- e. 0

III. The MsgBox K statement will display

- a. 4\*\*
- b. 2
- c. 10
- d. 1
- e. no value

IV. The MsgBox J statement will display

- a. 4
- b. 2
- c. 10
- d. 1
- e. no value\*\*

V. The MsgBox I statement will display

- a. 4
- b. 2
- c. 10
- d. 1
- e. no value\*\*

21. The following loop

Do

    Sum = Sum + Counter

    Counter = Counter + 1

Loop Until Counter > 100

I. never terminates

II. must execute at least once

III. terminates when Counter > 100

a. I only

b. II only

c. III only

d. II & III\*\*

e. none of the above

22. Which of the following program segments will calculate the sum of integers from 1 to 100?

I. Sum = 0

    For I = 1 To 100

        Sum = Sum + I

    Next I

II. Sum = 0

    For I = 100 To 1 Step -1

        Sum = Sum + I

    Next I

III. Sum = 0

    If I <= 100 Then

        Sum = Sum + I

    End If

a. I only

b. II only

c. III only

d. I & II\*\*

e. II & III

23. Use the following function to answer the following questions I-III.

```
Public Function Power(x As Single, y As Integer) As Single
```

```
Dim z As Integer
```

```
Product = 1
```

```
For z = 1 To y
```

```
 Product = Product * x
```

```
Next z
```

```
Power = Product
```

```
End Function
```

I. The base of the power function calculated in function *Power* is

a. 1

b. x\*\*

c. y

d. z

e. none of the above

II. The exponent in function *Power* is

- a. *x*
- b. *y\*\**
- c. *z*
- d. *Power*
- e. none of the above

III. A correct invocation of *Power* is

- 1. `MsgBox Power(3, 4)`
- 2. `MsgBox Power(Power(3, 2), 4)`
- 3. `Sum = Power(Base, n) + Power(2, 3)`
- 4. `Sum = Power(2, 3.2) + Power(3.2, 2)`

- a. 1 only
- b. 1 & 2
- c. 1 & 3
- d. 1, 2 & 3\*\*
- e. all of the above

24. What is the output of the following program segment?

```
Dim Index, Start As Integer
Dim MyName As String
MyName = "XYZ"
Start = Asc("A")
For Index = Start To Start + 2
 Mid(MyName, Index - 64, 1) = Chr(Index)
Next Index
MsgBox MyName
```

- a. BCD
- b. abc
- c. ABC\*\*
- d. 123
- e. no output, syntax error

25. Which of the following expressions evaluates to zero?

- a. `3 Mod 2 - 2`
- b. `1 - 4 Mod 3**`
- c. `6 Mod 3 - 1`
- d. `6 \ 2 + 1`
- e. `2 + 6 Mod 2`

26. Given a 12-element, one-dimensional *integer* array named *Numbers* and an *integer* variable named *j* and the following statements,

```
Numbers(1) = 8
For j = 2 To 12
 Numbers(j) = (j - 1) * Numbers(j - 1) \ (j - 1)
MsgBox Num(j)
Next j
```

Show the resulting contents of *Numbers*.

- a. all 8s\*\*
- b. 8, 16, 24, 32, etc.
- c. 8, 0, 8, 0, 8, 0, 8, 0
- d. 8, 64, 132, 264, etc.

27. What value will the following program produce?

```
(General)(declarations)
Const Octo = 8
Dim C As Integer, X As Integer, Y As Integer, Z As Integer

Private Sub Form_Load()
C = -3
X = 0
Y = 4
Z = Zmake(C, Octo, X) + Zmake(Y, C, Zmake(X, Y, C))
MsgBox Z
End Sub

Public Function Zmake(A1 As Integer, A2 As Integer, A3 As Integer) As Integer
Dim Pr As Integer
Pr = (A2 - A3) ^ 2
Zmake = A1 * Pr
End Function
```

- a. -192
- b. -156\*\*
- c. 156
- d. 192