Chapter 2: Functions and Control Structures

TRUE/FALSE

1. A function definition contains the lines of code that make up a function.
   ANS: T  PTS: 1  REF: 75

2. Functions are placed within parentheses that follow a parameter name.
   ANS: F  PTS: 1  REF: 75

3. A function must contain a parameter.
   ANS: F  PTS: 1  REF: 76

4. Function arguments are the statements that do the actual work of the function and must be contained within the function braces.
   ANS: F  PTS: 1  REF: 76

5. A function executes automatically.
   ANS: F  PTS: 1  REF: 77

6. Like variables, function names are case sensitive.
   ANS: F  PTS: 1  REF: 78

7. A return statement is a statement that returns a value to the statement that called the function.
   ANS: T  PTS: 1  REF: 78

8. A function must return a value.
   ANS: F  PTS: 1  REF: 78

9. Variable scope refers to the location that a declared variable can be used.
   ANS: T  PTS: 1  REF: 82

10. If you attempt to use a local variable outside the function in which it is declared, you receive an error message.
    ANS: T  PTS: 1  REF: 82

11. The formal parameters within the parentheses of a function declaration are global variables.
    ANS: F  PTS: 1  REF: 82

12. Global variables are automatically available to all parts of your program, including functions.
13. In PHP, you must declare a global variable with the `global` keyword inside a function definition for the variable to be available within the scope of that function.

ANS: T  
PTS: 1  
REF: 82-83

14. Using parentheses to enclose the conditional expression of an `if` statement is optional.

ANS: F  
PTS: 1  
REF: 94

15. If a command block is missing either the opening or closing brace, an error occurs.

ANS: T  
PTS: 1  
REF: 94

16. The `else` clause can only be used with an `if` statement.

ANS: T  
PTS: 1  
REF: 107

17. When one decision-making statement is contained within another decision-making statement, they are referred to as multiple decision-making structures.

ANS: F  
PTS: 1  
REF: 113

18. The `switch` statement controls program flow by executing a specific set of statements, depending on the value of an expression.

ANS: T  
PTS: 1  
REF: 124

19. The `default` label contains statements that execute when the value returned by the `switch` statement expression does not match any `case` label.

ANS: T  
PTS: 1  
REF: 135

20. To ensure that the `while` statement will eventually end, you must include code within the body of the `while` statement that changes the value of the conditional expression.

ANS: T  
PTS: 1  
REF: 160

21. You can use the `terminate` statement to halt a looping statement and restart the loop with a new iteration.

ANS: F  
PTS: 1  
REF: 160

22. The `do...while` statement executes a statement or statements once, then repeats the execution as long as a given conditional expression evaluates to `TRUE`.

ANS: T  
PTS: 1  
REF: 162

23. The statements in a `do...while` statement always execute repeatedly before the conditional expression evaluates the count variable.
ANS: F Pts: 1 Ref: 101

24. The for statement performs essentially the same function as the while statement.
ANS: T Pts: 1 Ref: 103

25. One of the primary differences between the while statement and the for statement is that in addition to a conditional expression, the for statement can also include code that initializes a counter and changes its value with each iteration.
ANS: T Pts: 1 Ref: 103

26. The for...while statement is used to iterate or loop through the elements in an array.
ANS: F Pts: 1 Ref: 105

27. You will not receive an error if you attempt to use a foreach statement with any variable types other than arrays.
ANS: F Pts: 1 Ref: 106

28. The primary use of the include and require statements is to reuse content on multiple web pages by allowing you to insert the content of an external file, called an include file, in your PHP scripts.
ANS: T Pts: 1 Ref: 109-110

29. The include statement and the require statement perform the same function and can be used interchangeably.
ANS: F Pts: 1 Ref: 110

30. Include statements support only absolute path notation.
ANS: F Pts: 1 Ref: 111

MULTIPLE CHOICE

1. When you use a variable in a PHP program, you must be aware of the variable’s ____.
   a. placement  
   b. scope  
   c. function  
   d. statement
   ANS: B Pts: 1 Ref: 82

2. A variable’s scope can be either global or ____.
   a. local  
   b. undeclared  
   c. universal  
   d. declared
   ANS: A Pts: 1 Ref: 82

3. What will be returned if you use a local variable outside the function in which it is declared?
   a. value  
   b. error message  
   c. function  
   d. nothing
4. The parameters within the parentheses of a function declaration are what kind of variables?
   a. local
   b. global
   c. unknown
   d. declared

   ANS: A  PTS: 1  REF: 82

5. With many programming languages, global variables are automatically available to all parts of your program, including ____.
   a. statements
   b. definitions
   c. functions
   d. declarations

   ANS: C  PTS: 1  REF: 82

6. When you declare a global variable with the `global` keyword, you do not need to assign the variable a(n) ____.
   a. value
   b. definition
   c. function
   d. name

   ANS: A  PTS: 1  REF: 83

7. A command block is a group of statements within a set of opening and closing ____.
   a. brackets
   b. braces
   c. parentheses
   d. quotation marks

   ANS: B  PTS: 1  REF: 84

8. When one decision-making statement is contained within another decision-making statement it is referred to as a ____ decision-making structure.
   a. enclosed
   b. contained
   c. nested
   d. layered

   ANS: C  PTS: 1  REF: 89

9. Which of the following terms is not associated with the switch statement?
   a. switch title
   b. case label
   c. executable statements
   d. break keyword

   ANS: A  PTS: 1  REF: 92

10. A(n) ____ statement is a control structure that repeatedly executes a statement or series of statements while a specific condition is TRUE or until a specific condition becomes TRUE.
    a. repeat
    b. replicate
    c. loop
    d. circular

    ANS: C  PTS: 1  REF: 96

11. A ____ is a variable that increments or decrements with each iteration of a loop statement
    a. counter
    b. incremener/decremener
    c. iterator
    d. repetitor

    ANS: A  PTS: 1  REF: 96

12. If you do not include code that changes the value used the by the condition expression, your program will be caught in a ____ loop.
13. A ____ statement is used to iterate or loop through the elements in an array.
   a. for             c. foreach
   b. while           d. if...else

   ANS: C         PTS: 1       REF: 105

14. The ____ statement halts the processing of the web page and displays an error if an include file cannot be found.
   a. include       c. Insert-contents
   b. insert        d. require

   ANS: D         PTS: 1       REF: 110

15. The ____ file is typically saved with a prefix of inc_.
   a. insert        c. nested
   b. include       d. increment

   ANS: B         PTS: 1       REF: 110

COMPLETION

1. Groups of statements you can execute as a single unit are called ________________.

   ANS: functions
   PTS: 1         REF: 75

2. ________________-control statements allow you to determine the order in which statements execute in a program.

   ANS: Flow
   PTS: 1         REF: 83

3. The function ________________ is the lines of code that make up a function.

   ANS: definition
   PTS: 1         REF: 75

4. A formal ________________ is a variable that is used within a function.

   ANS: parameter
   PTS: 1         REF: 75

5. A function ________________ executes a function.

   ANS: call
6. A ____________________ statement is a statement that returns a value to the statement that called the function.

ANS: return

PTS: 1       REF: 78

7. Passing by ____________________ means that the actual variable is used within the function and any changes made to the variable by the function will remain after the function completes.

ANS: reference

PTS: 1       REF: 80

8. A ____________________ variable is declared outside a function and is available to all parts of the program.

ANS: global

PTS: 1       REF: 82

9. A ____________________ variable is declared inside a function and is only available within the function in which it is declared.

ANS: local

PTS: 1       REF: 82

10. You must use the ____________________ keyword to declare a global variable within the scope of a function.

ANS: global

PTS: 1       REF: 82-83

11. The ____________________ statement is used to execute specific programming code if the evaluation of a conditional expression returns a value of true.

ANS: if

PTS: 1       REF: 84

12. A(n) ____________________ block is a group of statements contained within a set of braces, similar to the way function statements are contained within a set of braces.

ANS: command

PTS: 1       REF: 84

13. An if statement that includes an else clause is called a(n) ____________________ statement.
When one decision-making statement is contained within another decision-making statement, they are called ____________________ decision-making structures.

ANS: nested

PTS: 1 REF: 89

____________________ are added to both the if and else portions of the if...else statement if a section contains more than one statement.

ANS: Braces

PTS: 1 REF: 90

The ____________________ statement controls program flow using a case statement that executing a specific set of statements, depending on the value of an expression.

ANS: switch

PTS: 1 REF: 92

The switch statement compares the value of an expression to a value contained within a special statement called a ____________________.

ANS: case label

PTS: 1 REF: 92

A switch statement contains the following components: the keyword switch, an expression, an opening brace, a case label, the executable statements, the keyword ____________________, a default label, and a closing brace.

ANS: break

PTS: 1 REF: 92

case $ExampleVar is an example of a ____________________ data type being used as a case label

ANS: variable name

variable

PTS: 1 REF: 93
20. \textit{case} "Monday" is an example of a \underline{\text{string literal}} data type being used as a \textit{case} label.

ANS: string literal
string literal

PTS: 1        REF: 93

21. \textit{case} 42 is an example of a \underline{\text{integer literal}} data type being used as a \textit{case} label.

ANS: integer literal
integer

PTS: 1        REF: 93

22. \textit{case} 125.78 is an example of a \underline{\text{floating-point literal}} data type being used as a \textit{case} label.

ANS: floating-point literal
floating point
floating-point

PTS: 1        REF: 93

23. The \underline{\text{default}} label contains statements that execute when the value returned by the \textit{switch} statement expression does not match a case label.

ANS: default

PTS: 1        REF: 93

24. The final \underline{\text{break}} statement after the final \textit{case} or \textit{default} statement is not required.

ANS: break

PTS: 1        REF: 94

25. A(n) \underline{\text{loop}} statement is a control structure that repeatedly executes a statement or a series of statements while a specific condition is \texttt{TRUE} or until a specific condition becomes \texttt{TRUE}.

ANS: loop

PTS: 1        REF: 96

26. The \underline{\text{while}} statement repeats a statement or series of statements as long as a given conditional expression evaluates to \texttt{TRUE}.

ANS: while

PTS: 1        REF: 96
27. The conditional expression in the while statement is enclosed within ____________________ following the keyword while.

   ANS: parentheses
   ()

   PTS: 1       REF: 96

28. Each repetition of a looping statement is called a(n) ____________________.

   ANS: iteration

   PTS: 1       REF: 96

29. A ________________ statement keeps repeating until its conditional expression evaluates to FALSE.

   ANS: while

   PTS: 1       REF: 96

30. A ________________ is a variable that increments or decrements with each iteration of a loop statement.

   ANS: counter

   PTS: 1       REF: 96

31. In a(n) ________________ loop, a loop statement never ends because its conditional expression is never FALSE.

   ANS: infinite

   PTS: 1       REF: 99

32. The ________________ loop executes a statement or statements once, then repeats the execution as long as a given conditional expression evaluates to TRUE.

   ANS: do...while
do while

   PTS: 1       REF: 100

33. The ________________ statement is used for repeating a statement or series of statements as long as a given conditional expression evaluates to TRUE.

   ANS: for

   PTS: 1       REF: 103
34. You must include a(n) ____________________ to separate each section in a for loop.
   
   ANS:  
   semicolon
   ;
   
   PTS:  1       REF:  104

35. The ____________________ statement is used to iterate or loop through the elements in an array.

   ANS:  foreach
   
   PTS:  1       REF:  105

36. In a foreach statement, you use the $variable_name ____________________ to access the value of the element that is available in an iteration.

   ANS:  argument
   
   PTS:  1       REF:  106

37. The ____________________ statement generates a warning if the include file cannot be found.

   ANS:  include
   
   PTS:  1       REF:  110

38. With the ____________________ statement the program assure that the file is added to the script only once and halts the processing of the web page and displays an error message if the include file cannot be found.

   ANS:  require_once
   
   PTS:  1       REF:  110