MULTIPLE CHOICE

1. In the first phase of the program development cycle you should:
   a. make a hierarchy chart
   b. identify all the variables needed
   c. identify the desired results
   d. identify appropriate test data
   
   ANS: C

2. An algorithm must:
   a. include step-by-step instructions
   b. be well defined and well ordered
   c. produce some result
   d. terminate in a finite time
   e. all of the above are true

   ANS: E

3. Which of the following is not part of the analysis phase of the program development cycle?
   a. determine the required output (the result)
   b. determine the required input (the data)
   c. determine the formulas needed to get the required results
   d. determine the names of all the variables to be used

   ANS: D

4. When a programmer breaks tasks down into smaller pieces, this is called:
   a. flowcharting
   b. modular programming
   c. the program development cycle
   d. hierarchical programming

   ANS: B

5. Submodules are also known as:
   a. subprograms
   b. procedures
   c. subroutines
   d. any of the above

   ANS: D
6. Which of the following is not a characteristic of a program module?
   a. it performs a single task
   b. it is self-contained and independent of other modules
   c. it is relatively short
   d. all of the above are characteristics of a program module

   ANS: D

7. Given the following statements from the main module of a certain program:
   Call Purchase Price module
   Write “Come back soon”
   What statement is executed immediately after the Call statement?
   a. Write “Come back soon”
   b. The first statement in the Purchase Price module
   c. Nothing is executed; this is an illegal Call
   d. It is impossible to tell; not enough information is given

   ANS: B

8. Given the following statements from the main module of a certain program:
   Call Purchase Price module
   Write “Come back soon”
   What statement is executed immediately after the last statement in the Purchase Price module?
   a. Write “Come back soon”
   b. The first statement in the Purchase Price module
   c. Nothing is executed; this is an illegal Call
   d. It is impossible to tell; not enough information is given

   ANS: A

9. When a large company completes development of new software, it is tested on a wide range of computers using different peripherals. This “in-house” testing is known as:
   a. internal documentation
   b. alpha testing
   c. Windows testing
   d. beta testing

   ANS: B

10. Which is not a way to organize a user’s guide?
    a. alphabetical order
    b. by theme
    c. by programmer name
    d. with tutorials

    ANS: C
11. A diagram that uses special symbols to display pictorially the flow of execution of a program or program module is a(n):
   a. hierarchy chart
   b. pseudocode listing
   c. application chart
   d. flowchart
   ANS: D

12. GUI stands for:
   a. Graphic Usability Interface
   b. Graphical User Interface
   c. Graphical Usability Interaction
   d. Graphic Usability Interaction
   ANS: B

13. The type of programming in which the actions of a user, such as clicking a mouse, determine the flow of how the program proceeds is called:
   a. procedural programming
   b. modularization
   c. event-driven programming
   d. objective programming
   ANS: C

14. The type of control structure that causes a branch forward at some point, causing a portion of the program to be skipped, is:
   a. a sequential structure
   b. a repetition structure
   c. a selection structure
   d. a loop structure
   ANS: C

15. In object-oriented programming, an object consists of:
   a. the data portion which are its attributes and the control structures associated with each attribute
   b. the data portion which are its procedures and its attributes
   c. attributes and procedures
   d. control structures and procedures
   ANS: C
TRUE/FALSE

1. True/False: External documentation consists of comments within a program that explain the code, step by step.
   ANS: F

2. True/False: When a program is written by identifying tasks and subtasks and then writing modules to deal with each task, this is known as modular programming.
   ANS: T

3. True/False: A Call statement transfers program control to the beginning of the submodule that is called.
   ANS: T

4. True/False: Virtually every commercial program includes some form of external documentation to help customers learn to use the software.
   ANS: T

5. True/False: A violation of a programming language's rules for creating valid statements is considered a logic error.
   ANS: F

6. True/False: A repetition structure consists of a series of consecutive statements that are executed in the order in which they appear.
   ANS: F

7. True/False: There are three basic control structures.
   ANS: T

8. True/False: Loops and repetition structures are the same thing.
   ANS: T

9. True/False: Variable names should be descriptive; they should indicate to anyone reading the code what that variable represents.
   ANS: T

10. True/False: The GUI interface was popularized in the mid-1980’s by Microsoft.
    ANS: F

11. True/False: When a programmer designs a program for a GUI, the programmer also designs the appearance of that program's screens.
    ANS: T

12. True/False: Top-down modular programming is another term for object-oriented programming.
    ANS: F

13. True/False: A modern PC is the product of an object-oriented approach.
    ANS: T
14. True/False: Only object-oriented programming uses the three basic control structures; these are not used by any other type of programming.
ANS: F

15. True/False: An example of a procedure associated with a shirt object is the color of the shirt.
ANS: F

SHORT ANSWER

1. A step-by-step method for solving a problem in a computer program is a(n) __________.
ANS: algorithm

2. Comments included within a program to explain parts of the code are called __________
ANS: internal documentation

3. Every program has a(n) __________ __________ which is where the program begins and normally ends.
ANS: main module

4. A visual way to keep track of a program’s modules and the relationships between modules is to create a __________ __________.
ANS: hierarchy chart

5. In a program, statements that are ignored (not processed) by the computer are __________.
ANS: comments

6. A programming error that results from failing to use the proper combination of statements to accomplish a certain task is a(n) __________ error.
ANS: logic

7. In a(n) __________ structure, there is a branch back to a previous statement in the program module.
ANS: loop or repetition

8. A synonym for a decision structure is a(n) __________ structure.
ANS: selection

9. In a GUI program, user actions such as pressing a key on the keyboard or clicking a mouse are known as __________.
ANS: events

10. The data portion of an object is known as its __________.
ANS: attributes

11. The procedures associated with an object are its __________.
ANS: methods

12. In a modern PC, anything you can click on is a(n) __________.
ANS: object
13. When one object is a special case of another object, it can __________ some or all properties from the other object.
ANS: inherit

14. In a GUI, command buttons, text boxes, and option buttons are all examples of __________.
ANS: controls

15. Each control in a GUI has its own attributes and __________ to which it responds.
ANS: events