Multiple Choice:

1. US Navy officer, ____________ played a key role in developing the first compiler and the business programming language called COBOL.
   - A. Grace Murray Hopper
   - B. Jeff Bezos
   - C. Andy Grove
   - D. Alan Kay
   **Answer:** A  **Reference:** Grace Murray Hopper Sails on Software  **Difficulty:** Moderate

2. The step in the problem-solving process that determines the resources that are available for a project is:
   - A. understanding the problem.
   - B. developing a plan.
   - C. evaluating.
   - D. carrying out the plan.
   **Answer:** B  **Reference:** How People Make Programs  **Difficulty:** Moderate

3. In programming, another term describing top-down design is:
   - A. reverse engineering.
   - B. subproblem alteration.
   - C. problem modification.
   - D. stepwise refinement.
   **Answer:** D  **Reference:** How People Make Programs  **Difficulty:** Moderate
4. __________ is the process of breaking problems into smaller and smaller problems.
   A. Reverse engineering
   B. Sub problem alteration
   C. Problem modification
   D. Stepwise refinement

   **Answer:** D  **Reference:** From Idea to Algorithm  **Difficulty:** Moderate

5. A(n) __________ is a set of steps used to solve a problem.
   A. syntax
   B. computer architecture
   C. operating system
   D. algorithm

   **Answer:** D  **Reference:** How People Make Programs  **Difficulty:** Moderate

6. In the programming process, testing the algorithm checks the:
   A. completed program.
   B. logic.
   C. syntax.
   D. pseudocode.

   **Answer:** B  **Reference:** Testing the Algorithm  **Difficulty:** Moderate

7. A programmer is __________ when he/she uses an algorithm to write programming language statements.
   A. debugging
   B. interpreting
   C. compiling
   D. coding

   **Answer:** D  **Reference:** From Algorithm to Program  **Difficulty:** Moderate

---

Copyright © 2008 Prentice-Hall. All rights reserved.
8. A common programming language is:
   
   A. C++.
   B. pseudocode.
   C. FTP.
   D. Mark III.

   **Answer:** A  **Reference:** A Simple Program  **Difficulty:** Easy

9. A(n) __________ is a named portion of a computer’s memory whose contents can be examined and changed.
   
   A. variable
   B. heading
   C. comment
   D. algorithm

   **Answer:** A  **Reference:** A Simple Program  **Difficulty:** Moderate

10. When executing the __________ control structure, the computer performs each instruction in the order it appears.

    A. repetition
    B. decision
    C. sequence
    D. selection

   **Answer:** C  **Reference:** Control Structures  **Difficulty:** Moderate

11. A __________ control structure tells a computer what to do, based on whether a condition is true or false.

    A. sequence
    B. selection
    C. pseudocode
    D. compiled

   **Answer:** B  **Reference:** Control Structures  **Difficulty:** Easy
12. The control structure used to make logical decisions is known as the:
   A. selection.
   B. pseudocode.
   C. sequence.
   D. compiled.
   Answer: A  Reference: Control Structures  Difficulty: Moderate

13. The control structure that repeats steps until a condition is satisfied is known as:
   A. repetition.
   B. serial.
   C. synchronization.
   D. control unit.
   Answer: A  Reference: Control Structures  Difficulty: Moderate

14. A(n) ____________ translates an entire program before passing it on to the computer for execution.
   A. parser
   B. syntax stabilizer
   C. compiler
   D. interpreter
   Answer: C  Reference: Into the Computer  Difficulty: Moderate

15. A(n) ____________ translates one program statement at a time.
   A. compiler
   B. coder
   C. parser
   D. interpreter
   Answer: D  Reference: Into the Computer  Difficulty: Challenging
Chapter 14: Systems Design and Development

16. __________ is defined as grammar rules of a programming language.
   A. Logic
   B. Debugging
   C. Syntax
   D. Data structure

   Answer: C   Reference Into the Computer   Difficulty: Moderate

17. A computer treats machine language as:
   A. binary.
   B. macro language.
   C. 4GL.
   D. psuedocode.

   Answer: A   Reference: Machine Language and Assembly Language   Difficulty: Moderate

18. For subtraction, if a SUB statement is used instead of 10110111, the programmer is using __________ language.
   A. fourth-generation
   B. assembly
   C. C++
   D. macro

   Answer: B   Reference: Machine Language and Assembly Language   Difficulty: Moderate

19. All of the following are true of assembly language EXCEPT:
   A. it is a low level language.
   B. it is used when speed and direct communication with hardware is essential.
   C. it must be rewritten if used on a computer with a different machine language.
   D. it requires little detail to be effective.

   Answer: D   Reference: Machine Language and Assembly Language   Difficulty: Challenging
20. The following are all high-level languages EXCEPT:
   A. COBOL.
   B. Assembler.
   C. Java.
   D. Basic.
   **Answer:** B  **Reference:** High-Level Languages  **Difficulty:** Easy

21. In structured programming, small programs or subprograms within a program are known as:
   A. modules.
   B. basic programs.
   C. variables.
   D. compiled statements.
   **Answer:** A  **Reference:** Structured Programming  **Difficulty:** Challenging

22. To overcome the problem of “spaghetti code”, ____________ was developed:
   A. structured programming
   B. assembling
   C. compiling
   D. extreme programming
   **Answer:** A  **Reference:** Structured Programming  **Difficulty:** Moderate

23. An example of an object-oriented programming language is:
   A. Java.
   B. Machine language.
   C. Assembly language.
   D. BASIC.
   **Answer:** A  **Reference** Object-Oriented Programming  **Difficulty:** Challenging
24. All of the following are true of object-oriented programming EXCEPT

A. it is easy to use features from one program in another program.
B. it is good for highly interactive simulations.
C. it supports hierarchical categorization of objects so that a new object can inherit properties and methods of the object from which it descends.
D. it cannot be used in multimedia authoring tools.

Answer: D  Reference: Object-Oriented Programming  Difficulty: Challenging

25. In object-oriented programming, objects

A. contain both data and instructions.
B. can only receive messages.
C. can only send messages.
D. cannot be reused.

Answer: A  Reference: Object-Oriented Programming  Difficulty: Moderate

26. Visual programming enables programmers to:

A. write machine code.
B. point to objects on the screen to incorporate them into the program code.
C. bypass tight security systems.
D. populate a database of visual products.

Answer: B  Reference: Visual Programming  Difficulty: Moderate

27. Apple’s HyperCard and Visual Basic are examples of:

A. second-generation languages.
B. machine languages.
C. visual programming languages.
D. macro languages.

Answer: C  Reference: Visual Programming  Difficulty: Moderate
28. __________ are used to automate tasks that are repeated frequently.
   A. Pseudocodes
   B. Macros
   C. Accelerator boards
   D. Emulators

**Answer:** B  **Reference:** Macro Languages  **Difficulty:** Moderate

29. Of the following, __________ language is the easiest to use and closest to natural English,
   A. macro
   B. machine
   C. assembly
   D. fourth-generation

**Answer:** D  **Reference:** Fourth-Generation Languages  **Difficulty:** Moderate

30. __________ is a standard language used to find information in a database.
   A. SQL
   B. XP
   C. Assembler
   D. Compiler

**Answer:** A  **Reference:** Fourth-Generation Languages  **Difficulty:** Moderate

31. __________ software tools enable a user to construct an application using only the features he/she will need.
   A. Object-oriented
   B. SQL
   C. Component
   D. Macro

**Answer:** C  **Reference:** Component Software  **Difficulty:** Moderate
Chapter 14: Systems Design and Development

32. ___________ programming is a collaborative approach to programming.

   A. Extreme
   B. Fourth-generation language
   C. High-level language
   D. HTML

Answer: A  Reference: Extreme Programming  Difficulty: Moderate

33. An extreme programming team includes all of the following EXCEPT:

   A. programmers.
   B. interpreters.
   C. clients.
   D. customers.

Answer: B  Reference: Extreme Programming  Difficulty: Moderate

34. ___________ is a page-description language commonly used to create Web pages.

   A. Word
   B. C++
   C. HTML
   D. Perl

Answer: C  Reference: Programming for the Web  Difficulty: Moderate

35. All of the following are benefits of outsourcing IT services EXCEPT:

   A. lower payroll expenses.
   B. able to hire the most talented individuals in the field.
   C. able to retain fewer permanent employees.
   D. employees develop more IT expertise.

Answer: D  Reference: Systems Development  Difficulty: Moderate
36. The first phase of the systems development life cycle (SDLC) is:
   A. analysis.  
   B. investigation.  
   C. development.  
   D. design.

   **Answer: B**  
   **Reference: Systems Development Lifecycle**  
   **Difficulty: Moderate**

37. The final phase of the SDLC is:
   A. maintenance.  
   B. retirement.  
   C. development.  
   D. implementation.

   **Answer: B**  
   **Reference: Systems Development Lifecycle**  
   **Difficulty: Moderate**

38. A feasibility study is part of the ________ phase.
   A. investigation  
   B. analysis  
   C. design  
   D. development

   **Answer: A**  
   **Reference: Investigation**  
   **Difficulty: Moderate**

39. ________ feasibility determines if the proposed system will meet the needs of the organization and be developed in a timely manner.
   A. Technical  
   B. Operational  
   C. Economic  
   D. Organizational

   **Answer: B**  
   **Reference: Investigation**  
   **Difficulty: Easy**
40. ______ feasibility studies the hardware and software needed for the proposed system and considers its reliability and whether or not it should be purchased or developed.

A. Organizational  
B. Operational  
C. Economic  
D. Technical  

Answer: D Reference: Investigation Difficulty: Easy

41. The project team investigates legal implications of the proposed system while doing the ______ feasibility study.

A. organizational  
B. technical  
C. operational  
D. economic  

Answer: A Reference: Investigation Difficulty: Moderate

42. Following on the feasibility studies, the steering committee decides whether or not to proceed with the ______ phase of the SDLC.

A. investigation  
B. development  
C. analysis  
D. design  

Answer: C Reference: Analysis Difficulty: Moderate

43. During the ______ phase of the SDLC, the systems analyst identifies requirement by interviewing users of the current system.

A. analysis  
B. development  
C. design  
D. investigation  

Answer: A Reference: Analysis Difficulty: Moderate
44. The functional requirements report documents the work done in the __________ phase.
   A. analysis
   B. development
   C. design
   D. investigation

   **Answer:** A  **Reference:** Analysis  **Difficulty:** Moderate

45. Prototyping is used in the __________ phase of the SDLC.
   A. analysis
   B. development
   C. design
   D. investigation

   **Answer:** C  **Reference:** Design  **Difficulty:** Easy

46. A(n) ___________ system is a limited working system that gives users and management an idea of what the completed system will look like.
   A. prototype
   B. beta tested
   C. alpha tested
   D. development

   **Answer:** A  **Reference:** Design  **Difficulty:** Moderate

47. The process of turning a design into an actual working system occurs during the __________ phase.
   A. design
   B. analysis
   C. development
   D. implementation

   **Answer:** C  **Reference:** Development  **Difficulty:** Moderate
48. Alpha testing is done in the ____________ phase of the SDLC.
   A. implementation  
   B. development  
   C. design  
   D. analysis

**Answer:** B

**Reference:** Development

**Difficulty:** Moderate

49. The ____________ phase of the SDLC includes end-user education and training, equipment replacement, and file conversion.
   A. implementation  
   B. maintenance  
   C. development  
   D. design

**Answer:** A

**Reference:** Implementation

**Difficulty:** Moderate

50. When converting to the new system, a company uses the ____________ approach by using the new system at a test site until it is deemed ready for implementation throughout the company.
   A. direct cutover  
   B. phase-in  
   C. pilot  
   D. parallel systems

**Answer:** C

**Reference:** Implementation

**Difficulty:** Moderate

51. Periodic evaluation of the new system is part of the ____________ phase of the SDLC.
   A. implementation  
   B. maintenance  
   C. development  
   D. design

**Answer:** B

**Reference:** Maintenance

**Difficulty:** Easy
52. Monitoring, evaluating, repairing, and enhancing are done throughout the ____________ phase of the SDLC.

   A. design
   B. investigation
   C. maintenance
   D. development

**Answer:** C  **Reference:** Maintenance  **Difficulty:** Moderate

53. A(n) ____________ is used by systems analysts to determine what project milestone is scheduled next and that milestone’s target completion date.

   A. data flow diagram
   B. decision table
   C. systems flowchart
   D. Gantt chart

**Answer:** D  **Reference:** The Systems Development Lifecycle  **Difficulty:** Easy

54. A(n) ____________ uses standard symbols to show the overall structure of a system, the sequence of activities in the system, and the type of media or technology used at each step.

   A. data flow diagram
   B. system flowchart
   C. prototype
   D. decision table

**Answer:** B  **Reference:** Modeling Tools  **Difficulty:** Challenging

55. A graph showing the movement of data through a system is known as a:

   A. data flow diagram.
   B. system flowchart.
   C. prototype.
   D. data dictionary.

**Answer:** A  **Reference:** Modeling Tools  **Difficulty:** Easy
56. In a data flow diagram, a process is indicated by a:
   A. diamond.
   B. triangle.
   C. arrow.
   D. circle.
   **Answer:** D  **Reference:** Modeling Tools  **Difficulty:** Challenging

57. In a data flow diagram, data flow is indicated by a(n):
   A. rectangle.
   B. square.
   C. circle.
   D. arrow.
   **Answer:** D  **Reference:** Modeling Tools  **Difficulty:** Challenging

58. A(n) ____________ is a modeling tool that uses a tabular method of visualizing and specifying rules based on multiple factors.
   A. decision table
   B. spreadsheet
   C. DFD
   D. SDLC
   **Answer:** A  **Reference:** Modeling Tools  **Difficulty:** Moderate

59. For a complex procedure, a systems analyst uses a(n) ____________ to document if-then statements.
   A. data flow diagram
   B. systems flowchart
   C. Gantt chart
   D. decision table
   **Answer:** D  **Reference:** Modeling Tools  **Difficulty:** Easy
Chapter 14: Systems Design and Development

60. __________ is a modeling tool that shows where an information system physically stores data.
   
   A. Data flow diagram
   B. Decision table
   C. Gantt chart
   D. System flowchart.

   **Answer:** D  **Reference:** Modeling Tools  **Difficulty:** Moderate

61. MIS stands for:

   A. management information systems.
   B. machinery information systems.
   C. management informative solutions.
   D. marginal information systems.

   **Answer:** A  **Reference:** The Science of Computing  **Difficulty:** Moderate

62. The field of __________ deals with the way hardware and software work together.

   A. prototype analysis
   B. beta testing
   C. computer design
   D. computer architecture

   **Answer:** D  **Reference:** The Science of Computing  **Difficulty:** Moderate

63. When a software engineer attempts to prove the correctness of the program, he/she is using __________ techniques.

   A. beta testing
   B. alpha testing
   C. prototype
   D. program verification

   **Answer:** D  **Reference:** Software Solutions  **Difficulty:** Moderate
64. A new experimental approach to software development in which each system is developed individually and quality is certified before it is integrated with other systems is called ____________ programming.

A. clean-room
B. structured
C. visual basic
D. object-oriented

Answer: A  Reference: Software Solutions  Difficulty: Moderate

Fill in the Blank:

65. The first step in the problem-solving process is ____________.

Answer: understanding the problem  Reference: How People Make Programs  Difficulty: Moderate

66. The last step in the programming process is ____________.

Answer: testing and debugging the program  Reference: How People Make Programs  Difficulty: Challenging

67. Programmers use stepwise refinement or ____________ design when they start with the main idea and work their way down to the details of the problem.

Answer: top-down  Reference: How People Make Programs  Difficulty: Moderate

68. ____________ is a mix of English and a computer language.

Answer: Pseudocode  Reference: How People Make Programs  Difficulty: Easy

69. Writing computer program statements is known as ____________.

Answer: coding  Reference: From Algorithm to Program  Difficulty: Moderate

70. A named portion of memory whose contents is examined and changed by a computer program is called a(n) ____________.

Answer: variable  Reference: A Simple Program  Difficulty: Challenging

71. A(n) ____________ control structure starts with the first instruction and stops with the last instruction.

Answer: sequence  Reference: Control Structures  Difficulty: Moderate
72. A(n) ____________ control structure tells a computer what to do based on whether a condition is true or false.
   
   **Answer:** selection or decision  **Reference:** Control Structures  **Difficulty:** Moderate

73. A(n) ____________ control structure is a looping mechanism.
   
   **Answer:** repetition  **Reference:** Control Structures  **Difficulty:** Moderate

74. A(n) ____________ is a program that translates and transmits computer program statements one at a time.
   
   **Answer:** interpreter  **Reference:** Into the Computer  **Difficulty:** Moderate

75. A(n) ____________ is a program that translates all statements in a computer program at the same time.
   
   **Answer:** compiler  **Reference:** Into the Computer  **Difficulty:** Moderate

76. ____________ errors are violations of the grammar rules of a programming language.
   
   **Answer:** Syntax  **Reference:** Into the Computer  **Difficulty:** Easy

77. An integrated programming environment includes a text editor, a compiler, and a(n) ____________ which locates and corrects errors.
   
   **Answer:** debugger  **Reference:** Into the Computer  **Difficulty:** Moderate

78. ____________ language is a low-level language in which instructions are represented by 1s and 0s that the CPU can execute directly.
   
   **Answer:** Machine  **Reference:** Machine Language and Assembly Language  **Difficulty:** Moderate

79. In ____________ language, programmers use alphabetic codes that correspond to the machine’s numeric instructions.
   
   **Answer:** assembly  **Reference:** Machine Language and Assembly Language  **Difficulty:** Easy

80. Machine language is often translated into ____________, a number system with base 16.
   
   **Answer:** hexadecimal  **Reference:** Machine Language and Assembly Language  **Difficulty:** Moderate

81. Structured programming addresses the problem of ____________ code in computer programs.
   
   **Answer:** spaghetti  **Reference:** Structured Programming  **Difficulty:** Moderate

82. OOP stands for ____________.
   
   **Answer:** object-oriented programming  **Reference:** Object-Oriented Programming  **Difficulty:** Challenging

83. Using OOP, programmers can build programs from prefabricated ____________.
   
   **Answer:** objects  **Reference:** Object-Oriented Programming  **Difficulty:** Easy
84. Programmers can use ____________ programming tools to draw pictures or choose objects shown on the screen.

Answer: visual  
Reference: Visual Programming  
Difficulty: Easy

85. User-oriented ____________ languages are also called scripting languages.

Answer: macro  
Reference: Macro Languages  
Difficulty: Moderate

86. 4GL stands for ____________.

Answer: fourth-generation language  
Reference: Fourth-Generation Languages  
Difficulty: Moderate

87. A recent development in the software industry is ____________ software, with which users make up custom applications using only the features they will need.

Answer: component  
Reference: Component Software  
Difficulty: Moderate

88. ____________ is a type of collaborative programming that has pairs of programmers working on an application at the same time.

Answer: Extreme programming  
Reference: Extreme Programming  
Difficulty: Easy

89. ____________ programming is a new methodology which emphasizes team work and frequent releases of software updates.

Answer: Extreme  
Reference: Extreme Programming  
Difficulty: Easy

90. ____________ is a full-featured object-oriented language used to create Web applets.

Answer: Java  
Reference: Programming for the Web  
Difficulty: Moderate

91. ____________ is a powerful markup language that separates Web page content from layout and overcomes HTML’s limitations.

Answer: XML  
Reference: Programming for the Web  
Difficulty: Moderate

92. ____________ systems are collections of people, machines, data, and methods organized to accomplish specific functions and solve specific problems.

Answer: Information Systems  
Reference: Programs in Perspective: Systems Analysis and the Systems Lifecycle  
Difficulty: Moderate

93. ____________ is a problem-solving process that begins when someone recognizes a problem or opportunity and ends with evaluation of the solution.

Answer: Systems development  
Reference: Systems Development  
Difficulty: Moderate

94. A(n) ____________ committee made up of representatives from each functional area in a company is responsible for deciding which IT project will be done first.

Answer: steering  
Reference: Systems Development  
Difficulty: Easy
Chapter 14: Systems Design and Development

95. __________ is used by companies who wish to contract systems analysts instead of hiring them.

   **Answer:** Outsourcing  
   **Reference:** Systems Development  
   **Difficulty:** Easy

96. SDLC stands for __________.

   **Answer:** systems development life cycle  
   **Reference:** The Systems Development Lifecycle  
   **Difficulty:** Moderate

97. The __________ phase of the SDLC studies an existing problem or opportunity and determines if a new system is feasible.

   **Answer:** investigation  
   **Reference:** Investigation  
   **Difficulty:** Moderate

98. __________ feasibility determines if the cost for the proposed system will be offset by the anticipated benefits.

   **Answer:** Economic  
   **Reference:** Investigation  
   **Difficulty:** Moderate

99. In the __________ phase of the SDLC, the systems analyst gathers data about the current system and identifies requirements of the new system.

   **Answer:** analysis  
   **Reference:** Analysis  
   **Difficulty:** Easy

100. In the SDLC, the investigation phase focuses on why, while the analysis phase focuses on what. The __________ phase focuses on how.

    **Answer:** design  
    **Reference:** Design  
    **Difficulty:** Easy

101. __________ is an iterative process in which the systems analyst uses a limited working system to show users how the completed system will work.

    **Answer:** Prototyping  
    **Reference:** Design  
    **Difficulty:** Easy

102. The __________ phase of the SDLC includes scheduling; hardware, software and communications purchasing; documentation; and programming.

    **Answer:** development  
    **Reference:** Development  
    **Difficulty:** Moderate

103. In the development phase, __________ testing is the initial testing done by the system development team.

    **Answer:** alpha  
    **Reference:** Development  
    **Difficulty:** Easy

104. At the end of the development phase, __________ testing is done by potential end users.

    **Answer:** beta  
    **Reference:** Development  
    **Difficulty:** Moderate

105. The systems analyst can choose one of four approaches for converting to a new system: direct cutover, parallel, phase-in or __________.

    **Answer:** pilot  
    **Reference:** Implementation  
    **Difficulty:** Moderate
106. When converting to a new system, the ____________ approach involves stopping the old system and then starting the new system.

Answer: direct cutover  Reference: Implementation  Difficulty: Moderate

107. When converting to the new system, the ____________ approach operates the old system along with the new system for a period of time.

Answer: parallel  Reference: Implementation  Difficulty: Moderate

108. The ____________ phase of the SDLC includes on-going monitoring, evaluating, repairing, and enhancing the new system.

Answer: maintenance  Reference: Maintenance  Difficulty: Easy

109. A(n) ____________ chart is used by the systems analyst to plan the schedule deadlines and determine milestones for systems development.

Answer: Gantt  Reference: How it Works: The Systems Development Lifecycle  Difficulty: Moderate

110. During system design, the systems analyst uses a(n) ____________ with standard symbols to show the sequence of activities as well as the type of media or technology used in each step.

Answer: system flowchart  Reference: Modeling Tools  Difficulty: Moderate

111. The ____________ is a modeling tool that shows how data moves through a system.

Answer: data flow diagram  Reference: Modeling Tools  Difficulty: Moderate

112. A(n) ____________ is a catalog of all the data flowing through a system.

Answer: data dictionary  Reference: Modeling Tools  Difficulty: Moderate

113. A(n) ____________ uses rows and columns to document rules and what happens when certain conditions occur.

Answer: decision table  Reference: Modeling Tools  Difficulty: Moderate

114. CASE stands for ____________.

Answer: computer-aided systems engineering  Reference: Computer-Aided Systems Engineering  Difficulty: Moderate

115. The academic discipline of ____________ includes programming, engineering, database management, graphic design, learning artificial intelligence, and creating and working with networks.

Answer: computer science  Reference: The Science of Computing  Difficulty: Easy
116. __________ involves the study and integration of how hardware and software are coordinated into an integrated system.

Answer: Computer architecture  Reference: The Science of Computing  Difficulty: Moderate

117. __________ determine the logical structure of data.

Answer: Data structures  Reference: The Science of Computing  Difficulty: Moderate

118. Computer __________ deals with the way hardware and software work together.

Answer: architecture  Reference: The Science of Computing  Difficulty: Moderate

119. __________ specialists apply the theoretical concepts of computer science to real-world, practical business problems.

Answer: Management information system, MIS  Reference: The Science of Computing  Difficulty: Moderate

120. __________ programming is a new experimental approach to software development that combines formal notation, proofs of correctness, and statistical quality control.

Answer: Clean-room  Reference: The State of Software  Difficulty: Challenging

Matching:

121. Match the following programming languages to the phrases that describe them:

   I. macro  A. developed in 1960 and still in use
   II. COBOL  B. language used in artificial intelligence
   III. LISP  C. automates tasks done over and over again
   IV. Java  D. low-level language used for applications that need to communicate directly with the hardware and operate very quickly
   V. assembly  E. code a computer’s CPU can understand and obey without translation
   VI. machine  F. excels at producing Web-based applets

Answers: C, A, B, F, D, E  Reference: Multiple locations  Difficulty: Challenging
122. Match the following SDLC phases to the keywords that describe them:

I. Investigation  A. training and system conversion
II. Analysis  B. end product is a functional requirements report
III. Design  C. monitoring and evaluating new system
IV. Development  D. includes prototyping
V. Implementation  E. identifying of problems or opportunities
VI. Maintenance  F. phasing out of system
VII. Retirement  G. scheduling, purchasing, documenting, programming, and testing

**Answers:** E, B, D, G, A, C, F  
**Difficulty:** Moderate  
**Reference:** The Systems Development Lifecycle