

Chapter 1 Testbank: Introduction

Multiple Choice

1. Which statement best describes a computer program?

- A) A program is a sequence of comments.
- B) A program can decide what task it is to perform.
- C) A program is a sequence of instructions and decisions that the computer carries out.
- D) A program can only perform one simple task.

Ans: C

Section Ref: Section 1.1 Computer Programs

Title: Which statement best describes a computer program?

Difficulty: Easy

2. Which statement regarding computer programs is correct?

- A) Computer programs can decide what task to perform.
- B) Large and complex computer programs are generally written by only one programmer.
- C) Computer programs are composed of extremely primitive operations.
- D) Small computer programs are not documented.

Answer: c

Section reference: Section 1.1 Computer Programs

Title: Which statement regarding computer programs is correct?

Difficulty: Easy

3. What does CPU stand for?

- A) Computer Programming Unit
- B) Computer Processing Unit
- C) Central Processing Unit
- D) Central Programming Unit

Ans: C

Section Ref: Section 1.2 The Anatomy of a Computer

Title: What does CPU stand for?

Difficulty: Easy

4. Which one of the following is NOT a function of a CPU?

- A) Performing arithmetic operations
- B) Processing data and controlling programs
- C) Querying a database

D) Fetching and storing data from storage and input devices

Ans: C

Section Ref: Section 1.2 The Anatomy of a Computer

Title: Which one of the following is NOT a function of a CPU?

Difficulty: Easy

5. Which type of storage is made from memory chips?

A) CD

B) hard disk

C) primary storage

D) DVD

Ans: C

Section Ref: Section 1.2 The Anatomy of a Computer

Title: Which type of storage is made from memory chips?

Difficulty: Easy

6. Which one of the following memory types provides storage that persists without electricity?

A) primary storage

B) RAM

C) memory

D) secondary storage

Ans: D

Section Ref: Section 1.2 The Anatomy of a Computer

Title: Which one of the following memory types provides storage that persists without electricity?

Difficulty: Easy

7. Which type of secondary storage consists of rotating platters, which are coated with a magnetic material, and read/write heads, which can detect and change the patterns of varying magnetic flux on the platters?

A) hard disk

B) flashdrive

C) DVD

D) RAM

Ans: A

Section Ref: Section 1.2 The Anatomy of a Computer

Title: Which type of secondary storage consists of rotating platters?

Difficulty: Easy

8. What are the electrical lines called that interconnect the CPU, RAM, and the electronics controlling the hard disk and other devices?

- A) bus
- B) network
- C) optical disk
- D) power lines

Ans: A

Section Ref: Section 1.2 The Anatomy of a Computer

Title: What are the electrical lines called on a computer?

Difficulty: Easy

9. Which part of a computer contains the CPU, the RAM, and connectors to peripheral devices?

- A) network
- B) bus
- C) motherboard
- D) optical disk

Ans: C

Section Ref: Section 1.2 The Anatomy of a Computer

Title: Which part of a computer contains the CPU, the RAM, and connectors to peripheral devices?

Difficulty: Easy

10. For a program to be executed, where must it reside so that the CPU can read its instructions?

- A) optical disk
- B) primary memory
- C) secondary memory
- D) hard disk

Ans: B

Section Ref: Section 1.2 The Anatomy of a Computer

Title: For a program to be executed, where must it reside so that the CPU can read its instructions?

Difficulty: Easy

11. Which memory type does not provide persistent storage?

- A) secondary storage
- B) hard disk
- C) primary storage
- D) DVD

Answer: c

Section reference: 1.2 The Anatomy of a Computer

Title: Which memory type does not provide persistent storage?

Difficulty: Easy

12. Which of the following is not contained on the motherboard of a computer?

- A) RAM
- B) integrated circuit
- C) hard disk
- D) CPU

Answer: c

Section reference: 1.2 The Anatomy of a Computer

Title: Which of the following is not contained on the motherboard of a computer?

Difficulty: Easy

13. What term is used to refer to the computer instructions that are executed by a CPU, which are specific to each CPU?

- A) virtual machine
- B) machine code
- C) high-level code
- D) instruction set

Ans: B

Section Ref: Section 1.3 The Java Programming Language

Title: What term is used to refer to the computer instructions that are executed by a CPU?

Difficulty: Easy

14. What is the JVM?

- A) A vital machine that never fails to run compiled Java code.
- B) A vital machine that compiles Java code into machine instructions.
- C) A virtual machine that runs compiled Java code on any CPU.
- D) A virtual machine that compiles Java code into machine instructions.

Answer: c

Section reference: 1.3 The Java Programming Language

Title: What is the JVM?

Difficulty: Easy

15. What is the term used to refer to Java code that runs in a browser?

- A) applet
- B) script
- C) html
- D) class

Answer: a

Section reference: 1.3 The Java Programming Language

Title: What is the term used to refer to Java code that runs in a browser?

Difficulty: easy

16. What term is used to refer to languages that allow programmers to describe tasks at a higher conceptual level than machine code?

- A) virtual
- B) high-level

- C) sophisticated
- D) conceptual

Ans: B

Section Ref: Section 1.3 The Java Programming Language

Title: What term is used to refer to languages that allow programmers to describe tasks at a higher conceptual level than machine code?

Difficulty: Easy

17. What translates high-level descriptions into machine code?

- A) debugger
- B) assembler
- C) compiler
- D) linker

Ans: C

Section Ref: Section 1.3 The Java Programming Language

Title: What translates high-level descriptions into machine code?

Difficulty: Easy

18. What translates Java source code into files that contain instructions for the JVM?

- A) linker
- B) compiler
- C) assembler
- D) interpreter

Ans: B

Section Ref: Section 1.3 The Java Programming Language

Title: What translates Java source code into files that contain instructions for the JVM?

Difficulty: Easy

19. Which statement is true about running a Java program on a different CPU?

- A) You need different Java source code for each processor.
- B) You can take code that has been generated by the Java compiler and run it on different CPUs.
- C) You need to recompile the Java program for each processor.
- D) You cannot run the program on a computer with a different processor because Java, being a high-level programming language, is machine dependent.

Ans: B

Section Ref: Section 1.3 The Java Programming Language

Title: Which statement is true about running a Java program on a different CPU?

Difficulty: Medium

20. When was Java officially introduced?

- A) 1989
- B) 1995
- C) 2005
- D) 2000

Ans: B

Section Ref: Section 1.3 The Java Programming Language

Title: When was Java officially introduced?

Difficulty: Easy

21. Which statement best describes the portability characteristic of Java?

- A) It is easy to copy Java source code from one machine to another.
- B) The same Java class files will run on different operating systems without change.
- C) It is easy to compile Java source code on different operating systems.
- D) It is easy to change a Java program so that it will work on different operating systems.

Ans: B

Section Ref: Section 1.3 The Java Programming Language

Title: Which statement best describes the portability characteristic of Java?

Difficulty: Easy

22. When a Java application starts, what is the name of the method that is executed?

- A) main
- B) start
- C) begin
- D) Main

Answer: a

Section reference: 1.4 Becoming Familiar With Your Programming Environment

Title: When a Java application starts, what is the name of the method that is executed?

Difficulty: Easy

23. Text enclosed between this and the end of line is ignored by the compiler.

- A) "
- B) //
- C) ()
- D) ""

Answer: b

Section reference: 1.5 Analyzing Your First Program

Title: Text enclosed between this and the end of line is ignored by the compiler.

Difficulty: Easy

24. What is the name of the file declaring the class named MyClass?

- A) MyClass

- B) myclass.java
- C) MyClass.class
- D) MyClass.java

Answer: d

Section reference: 1.5 Analyzing Your First Program

Title: What is the name of the file declaring the class named MyClass?

Difficulty : Easy

25. In a console window, how do you compile the declaration of the class MyClass?

- A) javac MyClass.java
- B) javac MyClass
- C) java MyClass.java
- D) java MyClass

Answer: a

Section reference: 1.5 Analyzing Your First Program

Title: In a console window, how do you compile the declaration of the class MyClass?

Difficulty : Medium

26. In a console window, assuming that MyClass includes the main method, how do you run the program?

- A) java MyClass.class
- B) javac MyClass
- C) java MyClass
- D) javac MyClass.java

Answer: c

Section reference: 1.5 Analyzing Your First Program

Title: In a console window, how do you run a Java program?

Difficulty: Medium

27. A(n) ____ is a collection of code that has been programmed and translated by someone else, ready for use in your program.

- A) method
- B) class
- C) parameter
- D) library

Answer: d

Section reference: 1.5 Analyzing Your First Program

Title: A(n) ____ is a collection of code ...

Difficulty: Easy

28. Every Java program consists of one or more of these fundamental building blocks.

- A) class
- B) CPU
- C) applet
- D) parameter

Ans: A

Section Ref: Section 1.5 Analyzing Your First Program

Title: TB Every Java program consists of one or more of these fundamental building blocks.

Difficulty: Easy

29. What is the name of the file that contains the Java source code for the class `BankAccount`?

- A) `BankAccount`
- B) `BankAccount.java`
- C) `BankAccount.class`
- D) `BankAccount.txt`

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the name of the file that contains the Java source code for this class?

Difficulty: Easy

30. A _____ contains sequences of instructions to perform a particular task.

- A) parameter
- B) label
- C) variable
- D) method

Ans: D

Section Ref: Section 1.5 Analyzing Your First Program

Title: A _____ contains sequences of instructions to perform a particular task.

Difficulty: Easy

31. What term is used to refer to an instruction in a method?

- A) statement
- B) constant
- C) comment
- D) object

Ans: A

Section Ref: Section 1.5 Analyzing Your First Program

Title: What term is used to refer to an instruction in a method?

Difficulty: Easy

32. In Java, every statement must end with this symbol.

- A) `.`
- B) `)`
- C) `!`

D) ;

Ans: D

Section Ref: Section 1.5 Analyzing Your First Program

Title: In Java, every statement must end with this symbol.

Difficulty: Easy

33. What term is used to refer to text in a program that helps human readers understand the program?

- A) methods
- B) comments
- C) constants
- D) statements

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: What term is used to refer to text in a program that helps human readers understand the program?

Difficulty: Easy

34. The Java compiler ignores any text between ____.

- A) (* and *)
- B) /* and */
- C) { * and * }
- D) // and //

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: The Java compiler ignores any text between ____.

Difficulty: Easy

35. What term is used to refer to a sequence of characters enclosed in quotation marks?

- A) string
- B) object
- C) comment
- D) variable

Ans: A

Section Ref: Section 1.5 Analyzing Your First Program

Title: What term is used to refer to a sequence of characters enclosed in quotation marks?

Difficulty: Easy

36. What entity belongs to a class and is manipulated in a program?

- A) constant

- B) package
- C) object
- D) comment

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: What entity belongs to a class and is manipulated in a program?

Difficulty: Easy

37. A method is called on what entity in the program?

- A) constant
- B) statement
- C) comment
- D) object

Ans: D

Section Ref: Section 1.5 Analyzing Your First Program

Title: A method is called on what entity in the program?

Difficulty: Easy

38. What term is used to refer to information passed in to a method on a call?

- A) class
- B) object
- C) parameter
- D) comment

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: What term is used to refer to information passed in to a method on a call?

Difficulty: Easy

39. Parameters to methods are enclosed by these symbols.

- A) ()
- B) " "
- C) { }
- D) / /

Ans: A

Section Ref: Section 1.5 Analyzing Your First Program

Title: Parameters to methods are enclosed by these symbols.

Difficulty: Easy

40. A method may be called by specifying which 3 items in the specified order?

- A) method name, parameters, object
- B) object, parameters, method name
- C) object, method name, parameters
- D) class, parameters, method name

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: A method is called by specifying which 3 items in the specified order?

Difficulty: Easy

41. What is the syntax for calling the `println` method on the object `System.out`?

- A) `println("Any message").System.out;`
- B) `System.out("Any message").println;`
- C) `System.out.println("Any message");`
- D) `println(System.out, "Any message");`

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the syntax for calling the `println` method on the object `System.out`?

Difficulty: Easy

42. What is the object in the given method call?

```
System.out.println("Welcome");
```

- A) `println`
- B) `System.out`
- C) `System.out.println`
- D) `System`

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the object in the given method call?

Difficulty: Easy

43. What is the name of the method in the given method call?

```
System.out.println("Welcome");
```

- A) `"Welcome"`
- B) `System`
- C) `println`
- D) `out`

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the name of the method in the given method call?

Difficulty: Easy

44. What is the parameter in the given method call?

```
System.out.println("Welcome");
```

A) out

B) println

C) "Welcome"

D) System

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the parameter in the given method call?

Difficulty: Easy

45. What is the output of the following Java statement?

```
System.out.println("4 + 6");
```

A) 10

B) 46

C) 4

D) 4 + 6

Ans: D

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the output of the following Java statement?

Difficulty: Easy

46. What is the output of the following Java statement?

```
System.out.println(4 + 6);
```

A) 4 + 6

B) 4

C) 10

D) 46

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the output of the following Java statement?

Difficulty: Easy

47. What type of program can you use to enter your Java program?

- A) compiler
- B) editor
- C) spreadsheet
- D) database

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: What type of program can you use to enter your Java program?

Difficulty: Easy

48. Which statement is true about a Java program?

- A) Java forces the programmer to use a particular layout for readability.
- B) Java requires that at most one statement appear on one line.
- C) The first method that is executed in a Java program is called Main.
- D) Java is case sensitive.

Ans: D

Section Ref: Section 1.5 Analyzing Your First Program

Title: Which statement is true about a Java program?

Difficulty: Easy

49. What is the name of the class declared in the file `MyClass.java`?

- A) `MyClass`
- B) `MyClass.class`
- C) `MyClass.java`
- D) `myclass`

Ans: A

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the name of the class declared in the file `MyClass.java`?

Difficulty: Easy

50. The Java compiler translates source code into what type of file?

- A) document
- B) object
- C) class
- D) text

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: The Java compiler translates source code into what type of file?

Difficulty: Easy

51. What is the name of the file created after a successful compilation of `MyClass.java`?

- A) `MyClass.java`
- B) `MyClass.class`
- C) `myClass.class`
- D) `MyClass`

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the name of the file created after a successful compilation of `MyClass.java`?

Difficulty: Easy

52. What does a class file contain?

- A) Instructions for the specific CPU on the computer.
- B) Instructions for the Java Virtual Machine.
- C) The JVM instructions for all classes in the Java application.
- D) The Java source code for a class.

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: What does a class file contain?

Difficulty: Easy

53. What is the file extension of a Java class file?

- A) `.java`
- B) There is no file extension.
- C) `.class`
- D) `.txt`

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is the file extension of a Java class file?

Difficulty: Easy

54. In a console window, what is the name of the command used to compile Java source code?

- A) `javac`
- B) `javadoc`

- C) compile
- D) java

Ans: A

Section Ref: Section 1.5 Analyzing Your First Program

Title: In a console window, what is the name of the command used to compile Java source code?

Difficulty: Easy

55. In a console window, what is the name of the command used to run a Java program?

- A) javadoc
- B) javac
- C) java
- D) run

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: In a console window, what is the name of the command used to run a Java program?

Difficulty: Easy

56. In a console window, how do you compile the declaration of the class `BankAccount`?

- A) `java BankAccount`
- B) `javac BankAccount`
- C) `javac BankAccount.java`
- D) `java BankAccount.java`

Ans: C

Section Ref: Section 1.5 Analyzing Your First Program

Title: In a console window, how do you compile the declaration of the class `BankAccount`?

Difficulty: Medium

57. In a console window, assuming that `BankAccountTester` includes the `main` method, how do you run the program?

- A) `javac BankAccountTester`
- B) `java BankAccountTester.class`
- C) `javac BankAccountTester.java`
- D) `java BankAccountTester`

Ans: D

Section Ref: Section 1.5 Analyzing Your First Program

Title: In a console window, how do you run a Java program?

Difficulty: Medium

58. What is a Java library?

- A) A collection of Java source code that has been programmed and can be reused.
- B) A collection of books on Java.
- C) A collection of electronic documentation on Java.
- D) A collection of code that has been programmed and translated by someone else, ready for you to use in your program.

Ans: D

Section Ref: Section 1.5 Analyzing Your First Program

Title: What is a Java library?

Difficulty: Easy

59. Which of the following statements is true about running a Java program?

- A) The Java compiler executes your program.
- B) The Java virtual machine loads the instructions for the program that you wrote, starts your program, and loads the necessary library files as they are required.
- C) The java compiler signals the JVM to execute the program.
- D) The javadoc utility runs the documentation of the program.

Ans: B

Section Ref: Section 1.5 Analyzing Your First Program

Title: Which of the following statements is true about running a Java program?

Difficulty: Easy

60. Suppose that a computer virus infects your computer and corrupts the files you were going to submit for your current homework assignment. What precaution could have saved you from a disastrously bad grade for this assignment?

- A) Defragment the hard drive.
- B) Purchase an anti-virus program to remove the virus from your computer.
- C) Make regular backups of all your important files.
- D) Purchase an extended warranty for your computer.

Ans: C

Section Ref: Programming Tip 1.1 Backup Copies

Title: What can prevent you from losing files that get corrupted?

Difficulty: Easy

61. Which one of the following statements regarding backup strategies for Java files is correct?

- A) You should have multiple copies of your source files in different locations.
- B) You should regularly print out your work so you can retype it in case of data loss.
- C) You should regularly back up the Java virtual machine instructions to prevent loss of valuable work.
- D) Your compiler automatically makes backups of your source files.

Answer: a

Section reference Programming Tip 1.1

Title: Which one of the following statements regarding backup strategies for Java files is correct?

Difficulty: Easy

62. Which statement is true about the following Java statement:

```
System.out.println("Hello!");
```

- A) There is a run-time error.
- B) There are no errors.
- C) There is a compile-time error.
- D) There are multiple errors.

Answer: c

Section reference: 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

63. Assuming the programmer wishes to display "Hello!" on the screen, which statement is true about the following Java statement:

```
System.out.println("Helo!");
```

- A) There is a run-time error.
- B) There are no errors.
- C) There is a compile-time error.
- D) There are multiple errors.

Answer: a

Section reference: 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

64. Assuming the programmer wishes to display "Hello!" on the screen, which statement is true about the following Java statement:

```
System.out.println("Hello!");
```

- A) There is a run-time error.
- B) There are no errors.
- C) There is a compile-time error.
- D) There are multiple errors.

Answer: b

Section reference: 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

65. Assuming the programmer wishes to display "Hello!" on the screen, which statement is true about the following Java statement:

```
System.out.println("Helo!");
```

- A) There is a run-time error.
- B) There are no errors.
- C) There is a compile-time error.
- D) There are multiple errors.

Answer: d

Section reference: 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

66. Assume that the following Java statement is contained in the main method of the class named Hello:

```
System.out.println("Hello!");
```

What is the name of the file generated by the Java compiler?

A) Hello.java

B) Hello

C) No file is generated due to an error.

D) Hello.class

Answer: c

Section reference: 1.6 Errors

Title: What is the name of the file generated by the Java compiler?

Difficulty: Easy

67. What is defensive programming?

A) Writing a program that does not contain run-time errors.

B) Programming in a language that allows programmers to describe tasks at a higher conceptual level than machine code.

C) Structuring programs and development processes in such a way that an error in one part of the program does not trigger a disastrous response.

D) Writing a program that does not contain compile-time errors.

Answer: c

Section reference: 1.6 Errors

Title: What is defensive programming?

Difficulty: Easy

68. What is the term used to describe an error detected by the compiler that is a violation of the programming language rules?

A) logic error

B) compile-time error

C) run-time error

D) typo

Ans: B

Section Ref: Section 1.6 Errors

Title: Term describing an error violating the programming language rules.

Difficulty: Easy

69. What is another term used to describe an error detected by the compiler that is a violation of the programming language rules?

A) typo

- B) logic error
- C) semantic error
- D) run-time error

Ans: C

Section Ref: Section 1.6 Errors

Title: Another term describing an error violating the programming language rules.

Difficulty: Easy

70. What is the term used to describe an error causing a program to take an action that the programmer did not intend?

- A) typo
- B) run-time error
- C) compile-time error
- D) syntax error

Ans: B

Section Ref: Section 1.6 Errors

Title: Term describing an error causing a program to take an action that the programmer did not intend

Difficulty: Easy

71. What is another term used to describe an error causing a program to take an action that the programmer did not intend?

- A) syntax error
- B) logic error
- C) mistake
- D) compile-time error

Ans: B

Section Ref: Section 1.6 Errors

Title: Another term describing an error causing a program to take an action that the programmer did not intend

Difficulty: Easy

72. Which statement is true about the following Java statement:

```
System.out.println("Welcome!");
```

- A) There are multiple errors.
- B) There are no errors.
- C) There is a run-time error.
- D) There is a compile-time error.

Ans: D

Section Ref: Section 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

73. Assuming the programmer wishes to output the phrase "Hello!", which of the following is true about the following Java statement.

```
System.out.println("Welcme!");
```

- A) There are multiple errors.
- B) There is a run-time error.
- C) There are no errors.
- D) There is a compile-time error.

Ans: B

Section Ref: Section 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

74. Which statement is true about the following Java statement:

```
System.out.println("Welcome!");
```

- A) There are no errors.
- B) There is a run-time error.
- C) There are multiple errors.
- D) There is a compile-time error.

Ans: A

Section Ref: Section 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

75. Assuming the programmer wishes to output the phrase "Welcome!", which of the following is true about the following Java statement.

```
System.out.Println("Wlcome!");
```

- A) There are no errors.
- B) There is a compile-time error.
- C) There is a run-time error.
- D) There are multiple errors.

Ans: D

Section Ref: Section 1.6 Errors

Title: Which statement is true about the following Java statement?

Difficulty: Easy

76. Assume that the following Java statement is contained in the `main` method of the class named `Welcome`:

```
System.out.println("Welcome!");
```

What is the name of the file generated by the Java compiler?

- A) `Welcome.class`
- B) `Welcome.java`
- C) No file is generated due to an error.
- D) `Welcome`

Ans: C

Section Ref: Section 1.6 Errors

Title: What is the name of the file generated by the Java compiler?

Difficulty: Easy

77. Which statement is true about the compilation process?

- A) The compiler will generate CPU specific instructions even if it detects an error.
- B) The compiler will generate Java virtual machine instructions even if it detects an error.
- C) The compiler will stop compiling when it finds the first error.
- D) The compiler will continue compiling after it finds an error.

Ans: D

Section Ref: Section 1.6 Errors

Title: Which statement is true about the compilation process?

Difficulty: Easy

78. Who or what is responsible for inspecting and testing the program to guard against logic errors?

- A) JVM
- B) programmer
- C) end-user
- D) compiler

Ans: B

Section Ref: Section 1.6 Errors

Title: Who/what is responsible for ... guarding against logic errors?

Difficulty: Easy

79. Structuring programs and development processes in such a way that an error in one part of the program does not trigger a disastrous response is referred to as ____.

- A) high-level programming
- B) offensive programming
- C) defensive programming

D) low-level programming

Ans: C

Section Ref: Section 1.6 Errors

Title: Structuring programs and development processes in such a way that an error in one part of the program does not trigger a disastrous response is referred to as ____.

Difficulty: Easy

80. What are special software tools called that let you trace through a program to find run-time errors?

- A) compiler
- B) debugger
- C) CPU
- D) virtual machine

Ans: B

Section Ref: Section 1.6 Errors

Title: What are special software tools called that let you trace through a program to find run-time errors?

Difficulty: Easy

81. A step sequence that contains precise instructions for what to do at each step and where to go next is _____.

- A) unambiguous
- B) terminating
- C) executable
- D) documented

Answer: a

Section reference: 1.7 Problem Solving: Algorithm Design

Title: A step sequence that contains precise instructions ...?

Difficulty:

82. A step sequence that can be carried out in practice is _____.

- A) unambiguous
- B) terminating
- C) executable
- D) documented

Answer: c

Section reference: 1.7 Problem Solving: Algorithm Design

Title: A step sequence that can be carried out in practice ...?

Difficulty: Easy

83. A step sequence that eventually comes to an end is _____.

- A) unambiguous
- B) terminating
- C) executable
- D) documented

Answer: b

Section reference: 1.7 Problem Solving: Algorithm Design

Title: A step sequence that eventually comes to an end ...?

Difficulty: Easy

84. What is the purpose of the following algorithm?

```
somenum = 0
```

```
Repeat the following steps for 15 times
```

```
input variable1
```

```
  if variable1 < somenum then
```

```
    somenum = variable1
```

```
  end of if
```

```
end of repeat
```

```
print somenum
```

A) To search for a particular number among 15 numbers.

B) To find the largest among 15 numbers.

C) To print out the 15 numbers.

D) To find the smallest among 15 numbers.

Answer: d

Title: What is the purpose of the following algorithm?

Section reference: 1.7 Problem Solving: Algorithm Design

Difficulty: Easy

85. Evaluate the given pseudocode to calculate the efficiency of a vehicle's fuel consumption using the following test values:

The trip odometer reading (odometer) = 350

The amount to fill the gas tank (amount) = 12

```
input odometer
```

```
input amount
```

```
output odometer/amount
```

What is the final output?

A) 27.7

B) 29.2

C) 34.4

D) 32.3

Answer: b

Section reference: 1.7 Problem Solving: Algorithm Design

Title: What is output of this pseudocode with these test values?

Difficulty: Medium

86. Evaluate the given pseudocode to calculate the weighted score for a student:

The average homework score (homework) = 95

The weight of homework (hwWeight) = 35%

The average exam score (exams) = 87

The weight of exams(exWeight) = 65%

```
input homework
input hwWeight
input exams
input exWeight
output homework*hwWeight + exams*exWeight
```

What is the final output?

A) 89.20

B) 89.80

C) 87.80

d.92.20

Answer: b

Section reference: 1.7 Problem Solving: Algorithm Design

Title: What is output of this pseudocode with these test values?

Difficulty: Medium

87. Evaluate the given pseudocode to calculate the payment (pmt) with the following test values:

The total number of hours worked (working_hours) = 60

The rate paid for hourly work (rate) = 12

```
input working_hours
input rate
pmt = working_hours * rate
if working_hours > 40 then
    extra_hours = working_hours - 40
    extra_pmt = extra_hours * rate
    pmt = pmt + extra_pmt
end of if
output pmt
```

What is the final output?

A) 960

b.840

c.240

d.720

Answer: a

Section reference: 1.7 Problem Solving: Algorithm Design

Title: What is output of this pseudocode with these test values?

Difficulty: Hard

88. What term is used to refer to an informal description of a sequence of steps for solving a problem?

- A) assembly language instructions
- B) pseudocode
- C) machine instructions for a specific CPU
- D) Java virtual machine instructions

Ans: B

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: What term is used to refer to an informal description of a sequence of steps for solving a problem?

Difficulty: Easy

89. What term is used to refer to a sequence of steps for solving a problem that is unambiguous, executable, and terminating?

- A) documentation
- B) pseudoprogram
- C) algorithm
- D) comments

Ans: C

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: What term is used to refer to a sequence of steps for solving a problem that is unambiguous, executable, and terminating?

Difficulty: Easy

90. Which of the following options is true about algorithms?

- A) Algorithms are described informally and can contain ambiguous steps.
- B) Algorithms are written in a programming language.
- C) Algorithms can replace the source code in programs.
- D) You must create an algorithm for a problem before you can create a program to solve the problem.

Ans: D

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: Which of the following options is true about algorithms?

Difficulty: Easy

91. A step sequence is unambiguous when _____

- A) it will eventually come to an end.
- B) it is clearly documented.
- C) it can be carried out in practice.
- D) there are precise instructions for what to do at each step and where to go next.

Ans: D

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: A step sequence is unambiguous when ...?

Difficulty: Easy

92. A step sequence is executable when _____

- A) it will eventually come to an end.
- B) it can be carried out in practice.
- C) it is documented.
- D) there are precise instructions for what to do at each step and where to go next.

Ans: B

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: A step sequence is executable when ...?

Difficulty: Easy

93. A step sequence is terminating when _____

- A) there are precise instructions for what to do at each step and where to go next.
- B) it will eventually come to an end.
- C) it can be documented.
- D) it can be carried out in practice.

Ans: B

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: A step sequence is terminating when ...?

Difficulty: Easy

94. What is the purpose of the following algorithm?

```
num = 0
```

```
Repeat the following steps for 10 times
```

```
input var1
```

```
  if var1 > num then
```

```
    num = var1
```

```
  end of if
```

```
end of repeat
```

```
print num
```

- A) To print out the 10 numbers
- B) To search for a particular number among 10 numbers
- C) To find the largest among 10 numbers
- D) To find the smallest among 10 numbers

Ans: C

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: What is the purpose of the following algorithm?

Difficulty: Easy

95. Evaluate the given pseudocode to calculate the efficiency of a vehicle's fuel consumption using the following test values:

The trip odometer reading (odometer) = 300

The amount to fill the gas tank (amount) = 15

```
input odometer
input amount
output odometer/amount
```

What is the final output?

- A) 15
- B) 10
- C) 30
- D) 20

Ans: D

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: What is output of this pseudocode with these test values?

Difficulty: Medium

96. Evaluate the given pseudocode to calculate the weighted score for a student:

The average program score (program) = 92

The weight of programs (pgmWeight) = 40%

The average exam score (exams) = 85

The weight of exams(exWeight) = 60%

```
input program
input pgmWeight
input exams
input exWeight
output program*pgmWeight + exams*exWeight
```

What is the final output?

- A) 89.20
- B) 87.80
- C) 89.80
- D) 92.20

Ans: B

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: What is output of this pseudocode with these test values?

Difficulty: Medium

97. Evaluate the given pseudocode to calculate the payment (pmt) with the following test values:

The total number of hours worked (working_hours) = 50

The rate paid for hourly work (rate) = 10

```
input working_hours
input rate
pmt = working_hours * rate
if working_hours > 40 then
    extra_hours = working_hours - 40
    extra_pmt = extra_hours * rate
    pmt = pmt + extra_pmt
end of if
output pmt
```

What is the final output?

A) 540

B) 580

C) 500

D) 600

Ans: D

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: What is output of this pseudocode with these test values?

Difficulty: Hard

98. What is the correct order of the steps in the program development process:

- i. Develop and describe the algorithm.
- ii. Translate the algorithm into Java.
- iii. Understand the problem.
- iv. Compile and test the program.
- v. Test the algorithm with different inputs.

A) iii, i, ii, iv, v

B) i, ii, iv, v, iii

C) iii, i, v, ii, iv

D) i, iii, v, ii, iv

Ans: C

Section Ref: Section 1.7 Problem Solving: Algorithm Design

Title: What is the order of the steps in the program development process?

Difficulty: Easy