

Test Bank for Java Illuminated 5th Anderson

TEST BANK SAMPLE PREVIEW

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Test Bank

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Chapter: Chapter 01 - Quiz

Multiple Choice

1. Which of the following is *not* a hexadecimal digit?

- A) 0
- B) 9
- C) A
- D) F
- E) G

Ans: E

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Analysis

2. The binary number *1010* is equivalent to which hexadecimal number?

- A) A
- B) B
- C) C
- D) D
- E) 9

Ans: A

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Analysis

3. What does JVM stand for?

- A) Java Virtual Memory
- B) Job Virtual Machine
- C) Java Virtual Mode
- D) Java Veritable Machine

E) Java Virtual Machine

Ans: E

Complexity: Easy

Ahead: Programming Languages

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

4. What is the name of the Java compiler?

A) java

B) javac

C) compiler

D) cc

E) jc

Ans: B

Complexity: Easy

Ahead: An Introduction to Programming

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

5. When you successfully compile the file *Hi.java*, the file _____ is created.

A) Hi

B) Hi.javac

C) Hi.class

D) class

E) Hi.java

Ans: C

Complexity: Moderate

Ahead: An Introduction to Programming

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Application

6. You have successfully compiled the file *Hi.java*. How do you run the corresponding program from the command line?

A) java Hi.java

B) java Hi.class

C) java Hi

D) Hi

E) Hi.class

Ans: C

Complexity: Moderate

Ahead: An Introduction to Programming

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Application

7. Which company introduced Java?

- A) Microsoft
- B) IBM
- C) Sun Microsystems (now Oracle)
- D) AT&T
- E) MIT

Ans: C

Complexity: Moderate

Ahead: Programming Languages

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Application

True/False

1. True or False? Main memory is made of DRAM.

Ans: True

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

2. True or False? A CPU rated at 1 GHz is capable of executing 1 million instructions per second.

Ans: False

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

3. True or False? A single bit can store one value, either a 0 or a 1.

Ans: True

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

4. True or False? Cache memory is hardware.

Ans: True

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

5. True or False? Binary numbers are composed of 0s and 1s.

Ans: True

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

6. True or False? The base for hexadecimal numbers is 15.

Ans: False

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

7. True or False? Java is a high-level language.

Ans: True

Complexity: Easy

Ahead: Programming Languages

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

8. True or False? Java is an object-oriented language.

Ans: True

Complexity: Easy

Ahead: Programming Languages

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

Short Answer

1. CPU stands for _____.

Ans: central processing unit

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

2. A byte contains _____ bits.

Ans: 8

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

3. DRAM stands for _____.

Ans: dynamic random access memory

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

4. URL stands for _____.

Ans: uniform resource locator

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

5. Unicode is a world standard to represent _____.

Ans: characters

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

Essay

1. Compare the causes of compiler, run-time, and logic errors.

Ans: Compiler errors arise from incorrect language syntax or misspellings. Run-time errors result from incorrect use of classes. Logic errors arise from incorrect program design or incorrect implementation of the design.

Complexity: Difficult

Ahead: An Introduction to Programming

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Analysis

2. How would you convert a binary number to a decimal number?

Ans: Multiply each digit in the binary number by $2^{\text{position}-1}$ and add all these values; count the rightmost position as position 1 and move left through the binary number.

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Application

3. Give two examples of operating systems.

Ans: Windows and Unix are two examples of operating systems.

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Analysis

4. List the digits and characters used in hexadecimal representation.

Ans: Digits 0 to 9 and characters A to F are used in hexadecimal representation.

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

5. What does it mean for a program to be readable?

Ans: Someone else should be able to read your program and figure out what it does and how it does it.

Complexity: Moderate

Ahead: Introduction

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Recall

6. Why would writing readable code help advance your career?

Ans: Writing readable code allows someone else to take over the maintenance of your program while you move on to bigger and better responsibilities.

Complexity: Moderate

Ahead: Introduction

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Application

7. Convert 162 into a binary number. Show your work.

Ans:

$$2^7 = 128; 162 - 128 = 34$$

$$2^5 = 32, \text{ and } 2^1 = 2, \text{ so}$$

$$2^7 * 1 + 2^6 * 0 + 2^5 * 1 + 2^4 * 0 + 2^3 * 0 + 2^2 * 0 + 2^1 * 1 + 2^0 * 0 = 1010\ 0010$$

Complexity: Moderate

Ahead: Data Representation

Subject: Chapter 1

Title: Introduction to Programming and the Java Language

Taxonomy: Application

Multiple Choice

1. The hexadecimal number *C1* is equivalent to which decimal number?

- A) 13
- B) 193
- C) 161
- D) 1
- E) 121

Ans: B

Complexity: Moderate

Ahead: Data Representation

Subject: Chapter 1

Taxonomy: Application

2. The hexadecimal number *8C* is equivalent to which binary number?

- A) 1100
- B) 100012
- C) 10001100
- D) 110011
- E) 11001000

Ans: C

Complexity: Moderate

Ahead: Data Representation

Subject: Chapter 1

Taxonomy: Application

3. The decimal value of the Unicode character *A* is:

- A) 0.
- B) 1.
- C) 27.
- D) 65.
- E) 56.

Ans: D

Complexity: Easy

Ahead: Data Representation

Subject: Chapter 1

Taxonomy: Analysis

True/False

1. Java is case-sensitive.

Ans: True

Complexity: Easy

Ahead: An Introduction to Programming

Subject: Chapter 1

Taxonomy: Recall

2. Boundary conditions are the values that sit on the boundaries of producing different output for a program.

Ans: True

Complexity: Easy

Ahead: An Introduction to Programming

Subject: Chapter 1

Taxonomy: Recall

3. Linux is an example of application software.

Ans: False

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Taxonomy: Recall

4. An operating system can schedule multiple programs to run during the same time interval.

Ans: True

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Taxonomy: Recall

5. GHz stands for gigahertz.

Ans: True

Complexity: Easy

Ahead: Basic Computer Concepts

Subject: Chapter 1

Taxonomy: Recall

Short Answer

1. Java's syntax is similar to the syntax of the _____ programming language.

Ans: C++

Complexity: Easy

Ahead: Programming Languages

Subject: Chapter 1

Taxonomy: Recall

2. The Java compiler converts Java source code into _____, which is a machine language for a virtual machine.

Ans: byte codes

Complexity: Easy
Ahead: Programming Languages
Subject: Chapter 1
Taxonomy: Recall

3. _____ is a method for expressing a program's order of instructions in the English language.

Ans: Pseudocode
Complexity: Easy
Ahead: An Introduction to Programming
Subject: Chapter 1
Taxonomy: Analysis