Java Illuminated 6th edition Anderson Test Bank

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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

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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
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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
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Taxonomy: Application

7. Which of the following companies 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 *0*s and *1*s.

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

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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

Fill-in-the-Blank

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

6. The _____ format allows for the compression and aggregation of multiple Java files into one.

Ans: JAR
Complexity: Easy
Ahead: An Introduction to Programming

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Subject: Chapter 1
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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 $2^{position-1}$ 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
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Taxonomy: Analysis

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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:
$2^7 = 128$; $162 – 128 = 34$
$2^5 = 32$, and $2^1 = 2$, 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
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8. From the command line, how do you check which version you have for your Java compiler?

Ans: javac -version
Complexity: Moderate
Ahead: An Introduction to Programming
Subject: Chapter 1
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Taxonomy: Recall