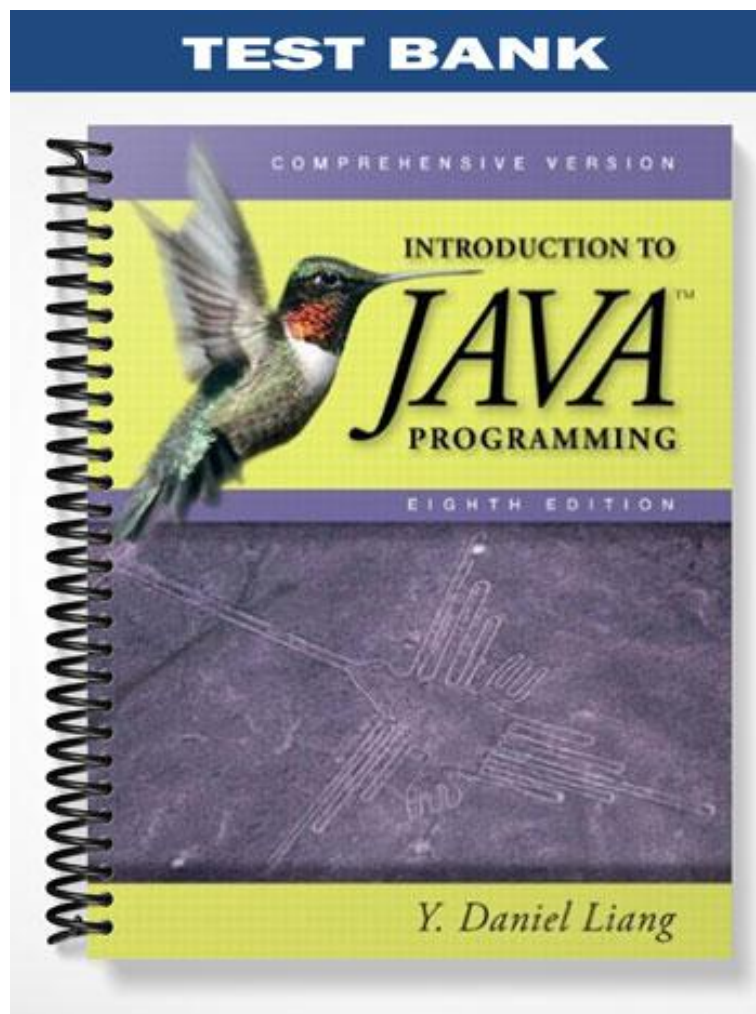


TEST BANK



COMPREHENSIVE VERSION

INTRODUCTION TO

JAVA[™]
PROGRAMMING

EIGHTH EDITION

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MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Suppose a Scanner object is created as follows: 1) _____

```
Scanner input = new Scanner(System.in);
```

What method do you use to read an int value?

- A) input.nextInt();
- B) input.int();
- C) input.nextInt();
- D) input.integer();

Answer: C

2) The following code fragment reads in two numbers: (Choose all that apply.) 2) _____

```
Scanner input = new Scanner(System.in);  
int i = input.nextInt();  
double d = input.nextDouble();
```

What are the correct ways to enter these two numbers?

- A) Enter a numeric value with a decimal point, a space, an integer, and then the Enter key.
- B) Enter an integer, two spaces, a double value, and then the Enter key.
- C) Enter an integer, an Enter key, a double value, and then the Enter key.
- D) Enter an integer, a space, a double value, and then the Enter key.

Answer: B, C, D

3) If you enter 1 2 3, when you run this program, what will be the output? 3) _____

```
import java.util.Scanner;  
  
public class Test1 {  
    public static void main(String[] args) {  
        Scanner input = new Scanner(System.in);  
        System.out.print("Enter three numbers: ");  
        double number1 = input.nextDouble();  
        double number2 = input.nextDouble();  
        double number3 = input.nextDouble();  
        // Compute average  
        double average = (number1 + number2 + number3) / 3;  
        // Display result  
        System.out.println(average);  
    }  
}
```

- A) 1.0
- B) 3.0
- C) 2.0
- D) 4.0

Answer: C

4) Every letter in a Java keyword is in lowercase. 4) _____

- A) true
- B) false

Answer: A

5) Which of the following is a valid identifier? (Choose all that apply.) 5) _____

- A) class
- B) radius
- C) 8+9
- D) 9X
- E) \$343

Answer: B, E

- 6) Which of the following are correct names for variables according to Java naming conventions? (Choose all that apply.) 6) _____
 A) radius B) RADIUS C) FindArea D) Radius E) findArea
 Answer: A, E
- 7) Which of the following are correct ways to declare variables? (Choose all that apply.) 7) _____
 A) int length; width; B) int length; int width;
 C) int length, int width; D) int length, width;
 Answer: B, D
- 8) _____ is the Java assignment operator. 8) _____
 A) == B) = C) =: D) :=
 Answer: B
- 9) To assign a value 1 to variable x, you write 9) _____
 A) x := 1; B) 1 := x; C) x == 1; D) x = 1; E) 1 = x;
 Answer: D
- 10) Which of the following assignment statements is incorrect? (Choose all that apply.) 10) _____
 A) i = 1; j = 1; k = 1; B) i == j == k == 1;
 C) i = 1 = j = 1 = k = 1; D) i = j = k = 1;
 Answer: B, C
- 11) To declare a constant MAX_LENGTH inside a method with value 99.98, you write 11) _____
 A) final double MAX_LENGTH = 99.98; B) final MAX_LENGTH = 99.98;
 C) double MAX_LENGTH = 99.98; D) final float MAX_LENGTH = 99.98;
 Answer: A
- 12) Which of the following is a constant, according to Java naming conventions? (Choose all that apply.) 12) _____
 A) read
 B) Test
 C) COUNT
 D) ReadInt
 E) MAX_VALUE
 Answer: C, E
- 13) To improve readability and maintainability, you should declare _____ instead of using literal values such as 3.14159. 13) _____
 A) classes B) variables C) methods D) constants
 Answer: D
- 14) Which of these data types requires the most amount of memory? 14) _____
 A) long B) byte C) short D) int
 Answer: A
- 15) To declare an int variable number with initial value 2, you write 15) _____
 A) int number = 2.0; B) int number = 2;
 C) int number = 2L; D) int number = 2l;
 Answer: B
- 16) What is the result of 45 / 4? 16) _____

A) 11
Answer: A

B) 11.25

C) 10

D) 12

17) Which of the following expressions will yield 0.5? (Choose all that apply.)

17) _____

A) (double) (1 / 2)

B) (double) 1 / 2

C) 1 / 2

D) 1 / 2.0

E) 1.0 / 2

Answer: B, D, E

18) Which of the following expression results in a value 1?

18) _____

A) 15 % 4

B) 25 % 5

C) 37 % 6

D) 2 % 1

Answer: C

19) 25 % 1 is _____.

19) _____

A) 1

B) 2

C) 3

D) 4

E) 0

Answer: E

20) -25 % 5 is _____.

20) _____

A) 1

B) 2

C) 3

D) 4

E) 0

Answer: E

21) 24 % 5 is _____.

21) _____

A) 1

B) 2

C) 3

D) 4

E) 0

Answer: D

22) -24 % 5 is _____.

22) _____

A) -1

B) -2

C) -3

D) -4

E) 0

Answer: D

23) -24 % -5 is _____.

23) _____

A) 3

B) -3

C) 4

D) -4

E) 0

Answer: D

24) To add a value 1 to variable x, you write (Choose all that apply.)

24) _____

A) x += 1;

B) 1 + x = x;

C) x := 1;

D) x = 1 + x;

E) x = x + 1;

Answer: A, D, E

25) To add number to sum, you write (Note: Java is case-sensitive) (Choose all that apply.)

25) _____

A) sum = Number + sum;

B) sum = sum + number;

C) number = sum + number;

D) number += sum;

E) sum += number;

Answer: B, E

26) Suppose x is 1. What is x after x += 2?

26) _____

A) 0

B) 1

C) 2

D) 3

E) 4

Answer: D

27) Suppose x is 1. What is x after x -= 1?

27) _____

- A) 0 B) 1 C) 2 D) -1 E) -2
Answer: A

28) What is x after the following statements? 28) _____

```
int x = 1;
int y = 2;
x *= y + 1;
```

- A) x is 4. B) x is 1. C) x is 2. D) x is 3.
Answer: D

29) What is x after the following statements? 29) _____

```
int x = 1;
x *= x + 1;
```

- A) x is 4. B) x is 3. C) x is 2. D) x is 1.
Answer: C

30) Math.pow(2, 3) returns _____. 30) _____

- A) 9 B) 8.0 C) 9.0 D) 8
Answer: B

31) The _____ method returns a raised to the power of b. 31) _____

- A) Math.exponent(a, b) B) Math.pow(a, b)
C) Math.power(a, b) D) Math.pow(b, a)
Answer: B

32) Analyze the following code. 32) _____

```
public class Test {
    public static void main(String[] args) {
        int month = 09;
        System.out.println("month is " + month);
    }
}
```

- A) The program displays month is 9.0
B) The program displays month is 9
C) The program displays month is 09
D) The program has a syntax error, because 09 is an incorrect literal value.
Answer: D

33) What is y displayed in the following code? 33) _____

```
public class Test1 {
    public static void main(String[] args) {
        int x = 1;
        int y = x = x + 1;
        System.out.println("y is " + y);
    }
}
```

A) y is 1 because x is assigned to y first.

B) y is 2 because x + 1 is assigned to x and then x is assigned to y.

C) y is 0.

D) The program has a compile error since x is redeclared in the statement `int y = x = x + 1`.

Answer: B

34) What is i printed?

34) _____

```
public class Test {
    public static void main(String[] args) {
        int j = 0;
        int i = ++j + j * 5;
        System.out.println("What is i? " + i);
    }
}
```

A) 0

B) 6

C) 5

D) 1

Answer: B

35) What is i printed in the following code?

35) _____

```
public class Test {
    public static void main(String[] args) {
        int j = 0;
        int i = j++ + j * 5;
        System.out.println("What is i? " + i);
    }
}
```

A) 0

B) 1

C) 6

D) 5

Answer: D

36) What is y displayed in the following code?

36) _____

```
public class Test {
    public static void main(String[] args) {
        int x = 1;
        int y = x++ + x;
        System.out.println("y is " + y);
    }
}
```

A) y is 4.

B) y is 2.

C) y is 3.

D) y is 1.

Answer: C

37) What is y displayed?

} 37)

```
public class Test {
    public static void main(String[] args) {
        int x = 1;
        int y = x + x++;
        System.out.println("y is " + y);
    }
}
```

- A) y is 3. B) y is 2. C) y is 1. D) y is 4.
Answer: B

- 38) To assign a double variable d to a float variable x, you write 38) _____
A) x = (float)d; B) x = d; C) x = (long)d D) x = (int)d;
Answer: A

- 39) What is the printout of the following code: 39) _____
- ```
double x = 5.5;
int y = (int)x;
System.out.println("x is " + x + " and y is " + y);
```
- A) x is 5.5 and y is 5  
B) x is 5 and y is 6  
C) x is 5.5 and y is 5.0  
D) x is 6.0 and y is 6.0  
E) x is 6 and y is 6  
Answer: A

- 40) Which of the following assignment statements is illegal? (Choose all that apply.)                      40) \_\_\_\_\_
- A) short s = 10;  
B) float f = -34;  
C) int t = 4.5;  
D) int t = 23;  
E) int t = (int>false;  
Answer: C, E

- 41) What is the value of (double)5/2?                      41) \_\_\_\_\_
- A) 2.0                      B) 2                      C) 3.0                      D) 2.5                      E) 3  
Answer: D

- 42) What is the value of (double)(5/2)?                      42) \_\_\_\_\_
- A) 2.0                      B) 2.5                      C) 3.0                      D) 2                      E) 3  
Answer: A

- 43) The expression (int)(76.0252175 \* 100) / 100 evaluates to \_\_\_\_\_.                      43) \_\_\_\_\_
- A) 76.0252175                      B) 76                      C) 76.03                      D) 76.02  
Answer: B

- 44) If you attempt to add an int, a byte, a long, and a double, the result will be a \_\_\_\_\_ value.                      44) \_\_\_\_\_
- A) long                      B) int                      C) byte                      D) double  
Answer: D

- 45) Which of the following is the correct expression of character 4?                      45) \_\_\_\_\_
- A) '4'                      B) 4                      C) '\0004'                      D) "4"  
Answer: A

- 46) A Java character is stored in \_\_\_\_\_.                      46) \_\_\_\_\_
- A) one byte                      B) two bytes                      C) four bytes                      D) three bytes  
Answer: B

- 47) Suppose x is a char variable with a value 'b'. What is the printout of the statement                      System.out.

println(+ 47)  
+x)?

- A) c                                      B) b                                      C) d                                      D) a  
Answer: A

48) Which of the following statement prints smith \ exam1 \ test.txt? 48) \_\_\_\_\_

- A) System.out.println("smith \ \ exam1 \ \ test.txt");  
B) System.out.println("smith \ exam1 \ test.txt");  
C) System.out.println("smith \ "exam1 \ "test.txt");  
D) System.out.println("smith" \ exam1" \ test.txt");

Answer: A

49) Suppose i is an int type variable. Which of the following statements display the character whose Unicode is stored in variable i? 49) \_\_\_\_\_

- A) System.out.println((char)i);                                      B) System.out.println(i);  
C) System.out.println(i + " ");                                      D) System.out.println((int)i);

Answer: A

50) The Unicode of 'a' is 97. What is the Unicode for 'c'? 50) \_\_\_\_\_

- A) 99                                      B) 98                                      C) 96                                      D) 97

Answer: A

51) Will System.out.println((char)4) display 4? 51) \_\_\_\_\_

- A) Yes                                      B) No

Answer: B

52) What is the printout of System.out.println('z' - 'a')? 52) \_\_\_\_\_

- A) 26                                      B) z                                      C) 25                                      D) a

Answer: C

53) An int variable can hold \_\_\_\_\_. (Choose all that apply.) 53) \_\_\_\_\_

- A) 'x'                                      B) "x"                                      C) 120                                      D) "120"                                      E) 120.0

Answer: A, C

54) Which of the following assignment statements is correct? (Choose all that apply.) 54) \_\_\_\_\_

- A) char c = 100;                                      B) char c = "100";                                      C) char c = "d";                                      D) char c = 'd';

Answer: A, D

55) The expression "Java " + 1 + 2 + 3 evaluates to \_\_\_\_\_. 55) \_\_\_\_\_

- A) Java6  
B) Java123  
C) Java 123  
D) java 123  
E) Illegal expression

Answer: C

56) Note that the Unicode for character A is 65. The expression "A" + 1 evaluates to \_\_\_\_\_. 56) \_\_\_\_\_

- A) B                                      B) 66  
C) A1                                      D) Illegal expression

Answer: C

57) Note that the Unicode for character A is 65. The expression 'A' + 1 evaluates to \_\_\_\_\_. 57) \_\_\_\_\_



A) A1

B) B

C) 66

D) Illegal expression

Answer: C

- 58) The `System.currentTimeMillis()` returns \_\_\_\_\_. 58) \_\_\_\_\_
- A) the current time in milliseconds since midnight, January 1, 1970 GMT (the Unix time)
  - B) the current time
  - C) the current time in milliseconds since midnight, January 1, 1970
  - D) the current time in milliseconds since midnight
  - E) the current time in milliseconds

Answer: A

- 59) Programming style is important, because \_\_\_\_\_. (Choose all that apply.) 59) \_\_\_\_\_
- A) good programming style makes a program more readable
  - B) good programming style can make a program run faster
  - C) a program may not compile if it has a bad style
  - D) good programming style helps reduce programming errors

Answer: A, D

- 60) According to Java naming convention, which of the following names can be variables? (Choose all that apply.) 60) \_\_\_\_\_
- A) `findArea`
  - B) `class`
  - C) `totalLength`
  - D) `FindArea`
  - E) `TOTAL_LENGTH`

Answer: A, C

- 61) If a program compiles fine, but it produces incorrect result, then the program suffers \_\_\_\_\_. 61) \_\_\_\_\_
- A) a logic error
  - B) a runtime error
  - C) a compilation error

Answer: A

- 62) The \_\_\_\_\_ method displays an input dialog for reading a string. (Choose all that apply.) 62) \_\_\_\_\_
- A) `String string = JOptionPane.showInputDialog(null, "Enter a string", "Input Demo", JOptionPane.QUESTION_MESSAGE);`
  - B) `String string = JOptionPane.showMessageDialog(null, "Enter a string", "Input Demo", JOptionPane.QUESTION_MESSAGE);`
  - C) `String string = JOptionPane.showInputDialog(null, "Enter a string");`
  - D) `String string = JOptionPane.showInputDialog("Enter a string", "Input Demo", JOptionPane.QUESTION_MESSAGE);`
  - E) `String string = JOptionPane.showInputDialog("Enter a string");`

Answer: A, C, E

- 63) The \_\_\_\_\_ method parses a string `s` to an int value. 63) \_\_\_\_\_
- A) `Integer.parseInt(s);`
  - B) `integer.parseInt(s);`
  - C) `integer.parseInt(s);`
  - D) `Integer.parseInt(s);`

Answer: D

- 64) The \_\_\_\_\_ method parses a string `s` to a double value. 64) \_\_\_\_\_
- A) `double.parseDouble(s);`
  - B) `double.parse(s);`
  - C) `Double.parsedouble(s);`
  - D) `Double.parseDouble(s);`

Answer: D

65) Analyze the following code.

65) \_\_\_\_\_

```
import javax.swing.*;

public class ShowErrors {
 public static void main(String[] args) {
 int i;
 int j;
 String s = JOptionPane.showInputDialog(null,
 "Enter an integer", "Input",
 JOptionPane.QUESTION_MESSAGE);
 j = Integer.parseInt(s);
 i = (i + 4);
 }
}
```

- A) The program compiles and runs fine.
- B) The program cannot compile because j is not initialized.
- C) The program compiles but has a runtime error because i does not have an initial value when it is used in `i = i + 4;`
- D) The program cannot compile because i does not have an initial value when it is used in `i = i + 4;`

Answer: D

- 1) C
- 2) B, C, D
- 3) C
- 4) A
- 5) B, E
- 6) A, E
- 7) B, D
- 8) B
- 9) D
- 10) B, C
- 11) A
- 12) C, E
- 13) D
- 14) A
- 15) B
- 16) A
- 17) B, D, E
- 18) C
- 19) E
- 20) E
- 21) D
- 22) D
- 23) D
- 24) A, D, E
- 25) B, E
- 26) D
- 27) A
- 28) D
- 29) C
- 30) B
- 31) B
- 32) D
- 33) B
- 34) B
- 35) D
- 36) C
- 37) B
- 38) A
- 39) A
- 40) C, E
- 41) D
- 42) A
- 43) B
- 44) D
- 45) A
- 46) B
- 47) A
- 48) A
- 49) A
- 50) A
- 51) B

- 52) C
- 53) A, C
- 54) A, D
- 55) C
- 56) C
- 57) C
- 58) A
- 59) A, D
- 60) A, C
- 61) A
- 62) A, C, E
- 63) D
- 64) D
- 65) D