Preparation QUIZ & TEST (Chapter 2)

[Chap. 2.2]

2.1 _____ is the code with natural language mixed with Java code.

A. Java program
B. A Java statement
C. Pseudocode
D. A flowchart diagram

2.2 What is the exact output of the following code?

```
double area = 3.5;
System.out.print("area");
System.out.print(area);
```

A. 3.53.5 B. 3.5 3.5
C. area3.5 D. area 3.5

[Chap. 2.3]

2.3 Suppose a Scanner object is created as follows, what method do you use to read a real number?

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

A. input.nextDouble();
B. input.nextdouble();
C. input.double();
D. input.Double();

2.4 The following code fragment reads in two numbers. What is the incorrect way to enter these two numbers?

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

A. Enter an integer, a space, a double value, 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 a numeric value with a decimal point, a space, an integer, and then the Enter key.

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

```
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. 2.0
C. 3.0 D. 4.0

[Chap. 2.4]

2.6 Every letter in a Java keyword is in lowercase?

A. true B. false

2.7 Which of the following is a valid identifier? Please select all that apply.

A. $343 B. class
C. 9X D. 8+9 E. radius

[Chap. 2.5]

2.8 Which of the following are correct names for variables according to Java naming conventions? Please select all that apply.

A. radius B. Radius
C. RADIUS D. findArea E. FindArea

2.9 Which of the following are correct ways to declare variables? Please select all that apply.
A. int length; int width;
B. int length, width;
C. int length; width;
D. int length, int width;

[Chap. 2.6]
2.10 _____ is the Java assignment operator.
A. == B. :=
C. = D. =:

2.11 To assign a value 1 to variable x, you write
A. 1 = x; B. x = 1;
C. x := 1; D. 1 := x; E. x == 1;

2.12 Which of the following assignment statements is incorrect? Please select all that apply.
A. i = j = k = 1;
B. i = 1; j = 1; k = 1;
C. i = 1 = j = 1 = k = 1;
D. i == j == k == 1;

[Chap. 2.7]
2.13 To declare a constant MAX_LENGTH inside a method with value 99.98, you write
A. final MAX_LENGTH = 99.98;
B. final int MAX_LENGTH = 99.98;
C. double MAX_LENGTH = 99.98;
D. final double MAX_LENGTH = 99.98;

2.14 Which of the following is a constant, according to Java naming conventions? Please select all that apply.
A. MAX_VALUE B. Test
C. read D. ReadInt
E. COUNT

2.15 To improve readability and maintainability, you should declare a _____ for PI instead of using literal values such as 3.14159.
A. variable B. method
C. constant D. class

[Chap. 2.8]
2.16 According to Java naming convention, which of the following names can be variables? Please select all that apply.
A. FindArea B. findArea
C. totalLength D. TOTAL_LENGTH
E. class

[Chap. 2.9]
2.17 Which of these data types requires the most amount of memory?
A. long B. int
C. short D. byte

2.18 What is the result of 45 / 4?
A. 10 B. 11
C. 11.25 D. 12

2.19 Which of the following expression results in a value 1?
A. 2 % 1 B. 15 % 4
C. 25 % 5 D. 37 % 6

2.20 25 % 1 is ____
A. 1 B. 2
C. 3 D. 4 E. 0

2.21 -25 % 5 is ____
A. 1 B. 2
C. 3 D. 4 E. 0

2.22 24 % 5 is ____
A. 1 B. 2
C. 3 D. 4 E. 0

2.23 -24 % 5 is ____
A. -1 B. -2
C. -3 D. -4 E. 0

2.24 -24 % -5 is ____
A. 3 B. -3
C. 4 D. -4 E. 0

2.25 How do you write 2.5 ^ 3.1 in Java?
A. 2.5 * 3.1 B. Math.pow(2.5, 3.1)
C. Math.pow(3.1, 2.5) D. 2.5 ** 3.1
E. 3.1 ** 2.5

2.26 Math.pow(2, 3) returns _____.
A. 9 B. 8
C. 9.0 D. 8.0

2.27 Math.pow(4, 1 / 2) returns _____.
A. 2 B. 2.0
C. 0 D. 1.0 E. 1

2.28 Math.pow(4, 1.0 / 2) returns _____.
A. 2 B. 2.0
C. 0 D. 1.0 E. 1

2.29 The _____ method returns a raised to the power of b.
A. Math.power(a, b) B. Math.exponent(a, b)
C. Math.pow(a, b) D. Math.pow(b, a)

[Chap. 2.10]
2.30 Analyze the following code.

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

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

2.31 Which of the following is incorrect?
A. 1_2 B. 0.4_56
C. 1_200_229 D. _4544

2.32 Which of the following are the same as 1545.534? Please select all that apply.
A. 1.545534e+3 B. 0.1545534e+4
C. 1545534.0e-3 D. 154553.4e-2

2.33 To declare an int variable number with initial value 2, you write
A. int number = 2L; B. int number = 2l;
C. int number = 2; D. int number = 2.0;

2.34 Which of the following is incorrect?
A. int x = 9; B. long x = 9;
C. float x = 1.0; D. double x = 1.0;

[Chap. 2.12]
2.35 The expression 4 + 20 / (3 - 1) * 2 is evaluated to
A. 4 B. 20
C. 24 D. 9 E. 25

[Chap. 2.13]
2.36 The System.currentTimeMillis() returns _____ .
A. the current time.
B. the current time in milliseconds.
C. the current time in milliseconds since midnight.
D. the current time in milliseconds since midnight, January 1, 1970.
E. the current time in milliseconds since midnight, January 1, 1970 GMT (the Unix time).

2.37 To obtain the current second, use _____.
A. System.currentTimeMillis() % 3600
B. System.currentTimeMillis() % 60
C. System.currentTimeMillis() / 1000 % 60
D. System.currentTimeMillis() / 1000 / 60 % 60
E. System.currentTimeMillis() / 1000 / 60 / 60 % 24

2.38 To obtain the current minute, use _____.
A. System.currentTimeMillis() % 3600
B. System.currentTimeMillis() % 60
C. System.currentTimeMillis() / 1000 % 60
D. System.currentTimeMillis() / 1000 / 60 % 60
E. System.currentTimeMillis() / 1000 / 60 / 60 % 24

2.39 To obtain the current hour in UTC, use _____.

A. System.currentTimeMillis() % 3600
B. System.currentTimeMillis() % 60
C. System.currentTimeMillis() / 1000 % 60
D. System.currentTimeMillis() / 1000 / 60 % 60
E. System.currentTimeMillis() / 1000 / 60 / 60 % 24

[Chap. 2.14]

2.40 Suppose x is 1. What is x after x += 2?

A. 0 B. 1
C. 2 D. 3 E. 4

2.41 Suppose x is 1. What is x after x -= 1?

A. 0 B. 1
C. 2 D. -1 E. -2

2.42 What is x after the following statements?

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

A. x is 1. B. x is 2.
C. x is 3. D. x is 4.

2.43 What is x after the following statements?

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

A. x is 1. B. x is 2.
C. x is 3. D. x is 4.

2.44 Which of the following statements are the same?

(A) x -= x + 4
(B) x = x + 4 - x
(C) x = x - (x + 4)

A. (A) and (B) are the same
B. (A) and (C) are the same
C. (B) and (C) are the same
D. (A), (B), and (C) are the same

2.45 To add a value 1 to variable x, you write _____. Please select all that apply.

A. 1 + x = x; B. x += 1;
C. x := 1; D. x = x + 1;
E. x = 1 + x;

2.46 To add number to sum, you write _____. (Note: Java is case-sensitive) Please select all that apply.

A. number += sum;
B. number = sum + number;
C. sum = Number + sum;
D. sum += number;
E. sum = sum + number;

[Chap. 2.15]

2.47 What is i printed?

```
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. 5 D. 6

2.48 What is i printed in the following code?

```
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. 5 D. 6

2.49 What is y displayed in the following code?

```
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 1. B. y is 2.
C. y is 3. D. y is 4.

2.50 What is y displayed?

```
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 1. B. y is 2.
C. y is 3. D. y is 4.

2.51 Are the following four statements equivalent?

```
number += 1;
number = number + 1;
number++;
++number;
```

A. Yes B. No

[Chap. 2.16]

2.52 To assign a double variable d to a float variable x, you write

A. x = (long)d B. x = (int)d;
C. x = d; D. x = (float)d;

2.53 Which of the following expressions will yield 0.5? Please select all that apply.

A. 1 / 2 B. 1.0 / 2
C. (double) (1 / 2) D. (double) 1 / 2
E. 1 / 2.0

2.54 What is the output of the following code:

```
double x = 5.5;
int y = (int)x;
System.out.println("x is " + x + " and y is " + y);
```

A. x is 5 and y is 6
B. x is 6.0 and y is 6.0
C. x is 6 and y is 6
D. x is 5.5 and y is 5
E. x is 5.5 and y is 5.0

2.55 Which of the following assignment statements is illegal?

A. float f = -34; B. int t = 23;
C. short s = 10; D. int t = 4.5;

2.56 What is the value of (double)5/2?

A. 2 B. 2.5
C. 3 D. 2.0 E. 3.0

2.57 What is the value of (double)(5/2)?

A. 2 B. 2.5
C. 3 D. 2.0 E. 3.0

2.58 Which of the following expression results in 45.37?

A. (int)(45.378 * 100) / 100
B. (int)(45.378 * 100) / 100.0
C. (int)(45.378 * 100 / 100)
D. (int)(45.378) * 100 / 100.0

2.59 The expression (int)(76.0252175 * 100) / 100 evaluates to _____.

A. 76.02 B. 76
C. 76.0252175 D. 76.03

2.60 If you attempt to add an int, a byte, a long, and a double, the result will be a(n) _____ value.

A. byte B. int
C. long D. double