1. How many times will the following code print "Welcome to Java"?

int count = 0;

while (count < 10) {

System.out.println("Welcome to Java");

count++;

}

a. 8

b. 9

c. 10

d. 11

e. 0

2. Analyze the following code.

int count = 0;

while (count < 100) {

// Point A

System.out.println("Welcome to Java!");

count++;

// Point B

}

// Point C

a. count < 100 is always true at Point A

b. count < 100 is always true at Point B

c. count < 100 is always false at Point B

d. count < 100 is always true at Point C

e. count < 100 is always false at Point C

3. How many times will the following code print "Welcome to Java"?

int count = 0;

while (count++ < 10) {

System.out.println("Welcome to Java");

}

a. 8

b. 9

c. 10

d. 11

e. 0

4. What is the output of the following code?

int x = 0;

while (x < 4) {

x = x + 1;

}

System.out.println("x is " + x);

a. x is 0

b. x is 1

c. x is 2

d. x is 3

e. x is 4

5. What will be displayed when the following code is executed?

int number = 6;

while (number > 0) {

number -= 3;

System.out.print(number + " ");

}

a. 6 3 0

b. 6 3

c. 3 0

d. 3 0 -3

e. 0 -3

6. How many times will the following code print "Welcome to Java"?

int count = 0;

do {

System.out.println("Welcome to Java");

count++;

} while (count < 10);

a. 8

b. 9

c. 10

d. 11

e. 0

7. How many times will the following code print "Welcome to Java"?

int count = 0;

do {

System.out.println("Welcome to Java");

} while (count++ < 10);

a. 8

b. 9

c. 10

d. 11

e. 0

8. How many times will the following code print "Welcome to Java"?

int count = 0;

do {

System.out.println("Welcome to Java");

} while (++count < 10);

a. 8

b. 9

c. 10

d. 11

e. 0

9. What is the value in count after the following loop is executed?

int count = 0;

do {

System.out.println("Welcome to Java");

} while (count++ < 9);

System.out.println(count);

a. 8

b. 9

c. 10

d. 11

e. 0

10. Analyze the following statement:

double sum = 0;

for (double d = 0; d < 10;) {

d += 0.1;

sum += sum + d;

}

a. The program has a compile error because the adjustment is missing in the for loop.

b. The program has a compile error because the control variable in the for loop cannot be of the double type.

c. The program runs in an infinite loop because d &lt; 10 would always be true.

d. The program compiles and runs fine.

11. Which of the following loops prints "Welcome to Java" 10 times?

A:

for (int count = 1; count <= 10; count++) {

System.out.println("Welcome to Java");

}

B:

for (int count = 0; count < 10; count++) {

System.out.println("Welcome to Java");

}

C:

for (int count = 1; count < 10; count++) {

System.out.println("Welcome to Java");

}

D:

for (int count = 0; count <= 10; count++) {

System.out.println("Welcome to Java");

}

a. BD

b. ABC

c. AC

d. BC

e. AB

12. Which of the following loops correctly computes 1/2 + 2/3 + 3/4 + ... + 99/100?

A:

double sum = 0;

for (int i = 1; i <= 99; i++) {

sum = i / (i + 1);

}

System.out.println("Sum is " + sum);

B:

double sum = 0;

for (int i = 1; i < 99; i++) {

sum += i / (i + 1);

}

System.out.println("Sum is " + sum);

C:

double sum = 0;

for (int i = 1; i <= 99; i++) {

sum += 1.0 \* i / (i + 1);

}

System.out.println("Sum is " + sum);

D:

double sum = 0;

for (int i = 1; i <= 99; i++) {

sum += i / (i + 1.0);

}

System.out.println("Sum is " + sum);

E:

double sum = 0;

for (int i = 1; i < 99; i++) {

sum += i / (i + 1.0);

}

System.out.println("Sum is " + sum);

a. BCD

b. ABCD

c. B

d. CDE

e. CD

13. The following loop displays \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

for (int i = 1; i <= 10; i++) {

System.out.print(i + " ");

i++;

}

a. 1 2 3 4 5 6 7 8 9

b. 1 2 3 4 5 6 7 8 9 10

c. 1 2 3 4 5

d. 1 3 5 7 9

e. 2 4 6 8 10

14. Do the following two statements in (I) and (II) result in the same value in sum?

(I):

for (int i = 0; i &lt; 10; ++i) {

sum += i;

}

(II):

for (int i = 0; i &lt; 10; i++) {

sum += i;

}

a. Yes

b. No

15. What is the output for y?

int y = 0;

for (int i = 0; i &lt; 10; ++i) {

y += i;

}

System.out.println(y);

a. 10

b. 11

c. 12

d. 13

e. 45

16. What is i after the following for loop?

int y = 0;

for (int i = 0; i &lt; 10; ++i) {

y += i;

}

a. 9

b. 10

c. 11

d. undefined

17. Is the following loop correct?

for ( ; ; );

a. Yes

b. No

18. Analyze the following fragment:

double sum = 0;

double d = 0;

while (d != 10.0) {

d += 0.1;

sum += sum + d;

}

a. The program does not compile because sum and d are declared double, but assigned with integer value 0.

b. The program never stops because d is always 0.1 inside the loop.

c. The program may not stop because of the phenomenon referred to as numerical inaccuracy for operating with floating-point numbers.

d. After the loop, sum is 0 + 0.1 + 0.2 + 0.3 + ... + 1.9

19. Analyze the following code:

public class Test {

public static void main (String[] args) {

int i = 0;

for (i = 0; i < 10; i++);

System.out.println(i + 4);

}

}

a. The program has a compile error because of the semicolon (;) on the for loop line.

b. The program compiles despite the semicolon (;) on the for loop line, and displays 4.

c. The program compiles despite the semicolon (;) on the for loop line, and displays 14.

d. The for loop in this program is same as for (i = 0; i < 10; i++) { }; System.out.println(i + 4);

20. How many times is the println statement executed?

for (int i = 0; i < 10; i++)

for (int j = 0; j < i; j++)

System.out.println(i \* j)

a. 100

b. 20

c. 10

d. 45

21. Which pattern is produced by the following code?

for (int i = 1; i <= 6; i++) {

for (int j = 6; j >= 1; j--)

System.out.print(j <= i ? j + " " : " " + " ");

System.out.println();

}

Pattern A Pattern B Pattern C Pattern D

1 1 2 3 4 5 6 1 1 2 3 4 5 6

1 2 1 2 3 4 5 2 1 1 2 3 4 5

1 2 3 1 2 3 4 3 2 1 1 2 3 4

1 2 3 4 1 2 3 4 3 2 1 1 2 3

1 2 3 4 5 1 2 5 4 3 2 1 1 2

1 2 3 4 5 6 1 6 5 4 3 2 1 1

a. Pattern A

b. Pattern B

c. Pattern C

d. Pattern D

22. How many times is the println statement executed?

for (int i = 0; i < 10; i++)

for (int j = 0; j < 10; j++)

System.out.println(i \* j);

a. 100

b. 20

c. 10

d. 45

23. To add 0.01 + 0.02 + ... + 1.00, what order should you use to add the numbers to get better accuracy?

a. add 0.01, 0.02, ..., 1.00 in this order to a sum variable whose initial value is 0.

b. add 1.00, 0.99, 0.98, ..., 0.02, 0.01 in this order to a sum variable whose initial value is 0.

24. Analyze the following code.

double sum = 0;

for (double d = 0; d < 10; sum += sum + d) {

d += 0.1;

}

A. The program has a syntax error because the adjustment statement is incorrect in the for loop.

B. The program has a syntax error because the control variable in the for loop cannot be of the double type.

C. The program compiles but does not stop because d would always be less than 10.

D. The program compiles and runs fine.

25. What is y after the following for loop statement is executed?

int y = 0;

for (int i = 0; i < 10; ++i) {

y += 1;

}

A. 9

B. 10

C. 11

D. 12

26. Will the following program terminate?

int balance = 10;

while (true) {

if (balance &lt; 9)

break;

balance = balance - 9;

}

a. Yes

b. No

27. What is sum after the following loop terminates?

int sum = 0;

int item = 0;

do {

item++;

sum += item;

if (sum &gt; 4)

break;

}

while (item &lt; 5);

a. 5

b. 6

c. 7

d. 8

e. 9

28. What is the output after the following loop terminates?

int number = 25;

int i;

boolean isPrime = true;

for (i = 2; i < number && isPrime; i++) {

if (number % i == 0) {

isPrime = false;

}

}

System.out.println("i is " + i + " isPrime is " + isPrime);

a. i is 5 isPrime is true

b. i is 5 isPrime is false

c. i is 6 isPrime is true

d. i is 6 isPrime is false

29. What is the output after the following loop terminates?

int number = 25;

int i;

boolean isPrime = true;

for (i = 2; i < number; i++) {

if (number % i == 0) {

isPrime = false;

break;

}

}

System.out.println("i is " + i + " isPrime is " + isPrime);

a. i is 5 isPrime is true

b. i is 5 isPrime is false

c. i is 6 isPrime is true

d. i is 6 isPrime is false

30. What is sum after the following loop terminates?

int sum = 0;

int item = 0;

do {

item++;

if (sum &gt;= 4)

continue;

sum += item;

}

while (item &lt; 5);

a. 6

b. 7

c. 8

d. 9

e. 10

31. Will the following program terminate?

int balance = 10;

while (true) {

if (balance &lt; 9)

continue;

balance = balance - 9;

}

a. Yes

b. No

32. What balance after the following code is executed?

int balance = 10;

while (balance >= 1) {

if (balance < 9)

continue;

balance = balance - 9;

}

A. -1

B. 0

C. 1

D. 2

E. The loop does not end

33. What is the value of balance after the following code is executed?

int balance = 10;

while (balance >= 1) {

if (balance < 9)

break;

balance = balance - 9;

}

A. -1

B. 0

C. 1

D. 2

34. What is the number of iterations in the following loop?

for (int i = 1; i < n; i++) {

// iteration

}

a. 2\*n

b. n

c. n - 1

d. n + 1

35. What is the number of iterations in the following loop?

for (int i = 1; i <= n; i++) {

// iteration

}

a. 2\*n

b. n

c. n - 1

d. n + 1

36. Suppose the input for number is 9. What is the output from running the following program?

import java.util.Scanner;

public class Test {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter an integer: ");

int number = input.nextInt();

int i;

boolean isPrime = true;

for (i = 2; i < number && isPrime; i++) {

if (number % i == 0) {

isPrime = false;

}

}

System.out.println("i is " + i);

if (isPrime)

System.out.println(number + " is prime");

else

System.out.println(number + " is not prime");

}

}

a. i is 3 followed by 9 is prime

b. i is 3 followed by 9 is not prime

c. i is 4 followed by 9 is prime

d. i is 4 followed by 9 is not prime

37. Analyze the following code:

import java.util.Scanner;

public class Test {

public static void main(String[] args) {

int sum = 0;

for (int i = 0; i < 100000; i++) {

Scanner input = new Scanner(System.in);

sum += input.nextInt();

}

}

}

a. The program does not compile because the Scanner input = new Scanner(System.in); statement is inside the loop.

b. The program compiles, but does not run because the Scanner input = new Scanner(System.in); statement is inside the loop.

c. The program compiles and runs, but it is not efficient and unnecessary to execute the Scanner input = new Scanner(System.in); statement inside the loop. You should move the statement before the loop.

d. The program compiles, but does not run because there is not prompting message for entering the input.