This test includes program segments, which are not complete programs. Answer such questions with the assumption that the program segment is part of a correct program.

01.   Which of the following are Java program keyword categories?

(A) Reserved words, pre-defined identifiers and user-defined identifiers
(B) Reserved pre-defined identifiers, reserved user-defined identifiers and library identifiers
(C) void, static, println.
(D) None of the above

02.   Consider the two program segments below.

Segment A   Segment B

```
int a;                  int a = 100;
int b;                  int b = 200;
a = 100;
b = 200;
```

What is true about the comparison of these two segments?

(A) Segment A is correct and segment B is not correct.
(B) Segment A is incorrect and segment B is correct.
(C) Segment A and segment B are both correct.
(D) segment A and segment B are both incorrect.

03.   Consider the two program segments below.

Segment A   Segment B

int a;   int a = 100;
int b;   int b = 200;
System.out.println(a);   System.out.println(a);
System.out.println(b);   System.out.println(b);

What is true about the comparison of these two segments?

(A) Segment A is correct and segment B is not correct.
(B) Segment A is incorrect and segment B is correct.
(C) Segment A and segment B are both correct.
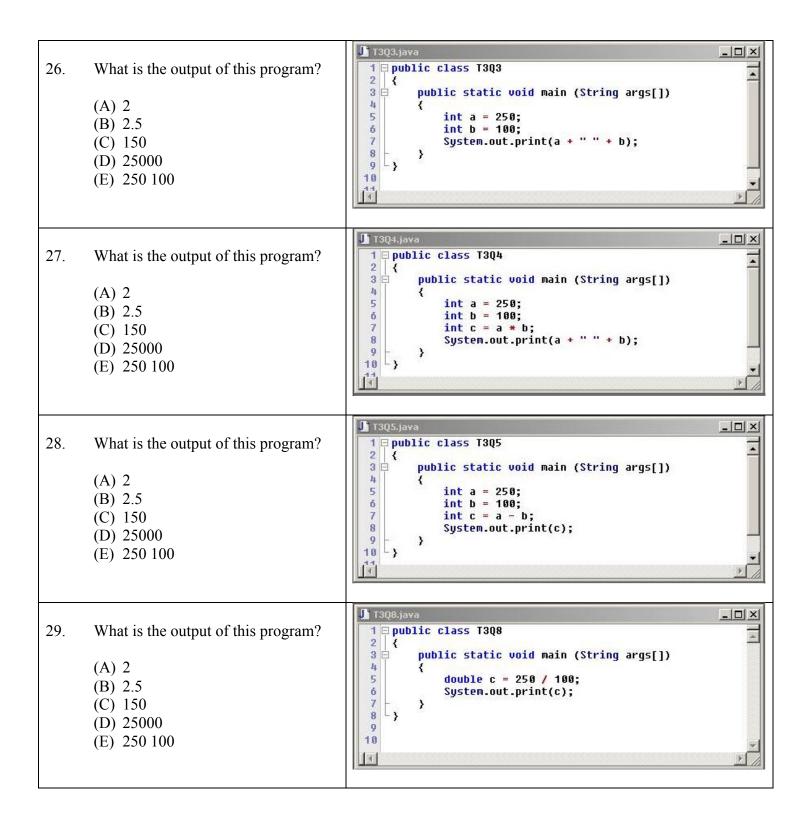(D) segment A and segment B are both incorrect.

04.   Which of the following are examples of reserved words?

(A) **public**, **void** and **static**
(B) **System**, **out** and **println**
(C) **System**, **public** and **void**
(D) **print**, **println** and **args**

05.   Which of the following is used to store integers?

(A) boolean
(B) char
(C) double
(D) int
(E) String

06.   Which of the following is used to store real numbers?

(A) boolean
(B) char
(C) double
(D) int
(E) String

07.   Which of the following would be ideal for storing a Middle Initial?

(A) boolean
(B) char
(C) double
(D) int
(E) String

08.   Which of the following would you need to store someone's name?

(A) boolean
(B) char
(C) double
(D) int
(E) String

09.   Which of the following can only store 2 possible values: true or false ?

(A) boolean
(B) char
(C) double
(D) int
(E) String

10.   Which of the following stores 1 single character?

(A) boolean
(B) char
(C) double
(D) int
(E) String

11.   Which of the following can store words, phrases, or sentences?

(A) boolean
(B) char
(C) double
(D) int
(E) String

12.   Which of the following Java data types is the most like the Lego NXT **Number** data type?

(A) boolean
(B) char
(C) double
(D) int
(E) String

13.   Which of the following Java data types is the most like the Lego NXT **Text** data type?

(A) boolean
(B) char
(C) double
(D) int
(E) String

14.   Which of the following Java data types is the most like the Lego NXT **Logic** data type?

(A) boolean
(B) char
(C) double
(D) int
(E) String

15.   Which of the following are Java Keywords?

(A) Reserved Words
(B) Pre-defined Identifiers
(C) User-defined Identifiers
(D) All of the above

16.   Assume x is defined as an *int*.
        Which of the following will add 1 to x?

(A) x++;
(B) x+=1;
(C) x=x+1;
(D) All of the above

17.   Assume *x* is defined as an *int*.
       Which of the following will subtract 1 from *x*?

       (A) x--;
       (B) x-=1;
       (C) x=x-1;
       (D) All of the above

18.   Which operator is used for *multiplication*?

       (A) +
       (B) –
       (C) *
       (D) /
       (E) %

19.   Which operator will find the *quotient* when performing *division*?

       (A) +
       (B) -
       (C) *
       (D) /
       (E) %

20.   Which operator will find the *remainder* when performing *division*?

       (A) +
       (B) -
       (C) *
       (D) /
       (E) %

21.   Assume *x* is defined as an *int*.
       Which of the following will double the value in *x*?

       (A) x = x + x;
       (B) x += x;
       (C) x = x * 2;
       (D) x *= 2;
       (E) All of the above

22. *7* is a(n) _____ value.

(A) char
(B) double
(C) int
(D) String

23. *7.0* is a(n) _____ value.

(A) char
(B) double
(C) int
(D) String

24. *'7'* is a(n) _____ value.

(A) char
(B) double
(C) int
(D) String

25. *"7"* is a(n) _____ value.

(A) char
(B) double
(C) int
(D) String

26. What is the output of this program?

(A) 2
(B) 2.5
(C) 150
(D) 25000
(E) 250 100

```
T3Q3.java
1  public class T3Q3
2  {
3      public static void main (String args[])
4      {
5          int a = 250;
6          int b = 100;
7          System.out.print(a + " " + b);
8      }
9  }
10
11
```

27. What is the output of this program?

(A) 2
(B) 2.5
(C) 150
(D) 25000
(E) 250 100

```
T3Q4.java
1  public class T3Q4
2  {
3      public static void main (String args[])
4      {
5          int a = 250;
6          int b = 100;
7          int c = a * b;
8          System.out.print(a + " " + b);
9      }
10 }
11
```

28. What is the output of this program?

(A) 2
(B) 2.5
(C) 150
(D) 25000
(E) 250 100

```
T3Q5.java
1  public class T3Q5
2  {
3      public static void main (String args[])
4      {
5          int a = 250;
6          int b = 100;
7          int c = a - b;
8          System.out.print(c);
9      }
10 }
11
```

29. What is the output of this program?

(A) 2
(B) 2.5
(C) 150
(D) 25000
(E) 250 100

```
T3Q8.java
1  public class T3Q8
2  {
3      public static void main (String args[])
4      {
5          double c = 250 / 100;
6          System.out.print(c);
7      }
8  }
9
10
```

30. What is the output of this program?

(A) John
(B) John Smith
(C) JohnSmith
(D) Smith, John
(E) John C. Smith

```
T3Q12.java                                    _ □ ×
1
2  public class T3Q12
3  {
4      public static void main (String args[])
5      {
6          String firstName = "John";
7          String lastName  = "Smith";
8          char space = ' ';
9          System.out.print(firstName + lastName);
10     }
11 }
12
```

31. What is the output of this program?

(A) John
(B) John Smith
(C) JohnSmith
(D) Smith, John
(E) John C. Smith

```
T3Q13.java                                    _ □ ×
1
2  public class T3Q13
3  {
4      public static void main (String args[])
5      {
6          String firstName = "John";
7          String lastName  = "Smith";
8          char space = ' ';
9          System.out.print(firstName + space + lastName);
10     }
11 }
12
```

32. What is the output of this program?

(A) John
(B) John Smith
(C) JohnSmith
(D) Smith, John
(E) John C. Smith

```
T3Q14.java                                    _ □ ×
1
2  public class T3Q14
3  {
4      public static void main (String args[])
5      {
6          String firstName = "John";
7          String lastName  = "Smith";
8          char space = ' ';
9          System.out.print(lastName + "," + space + firstName);
10     }
11 }
12
```

33. What is the output of this program?

(A) John
(B) John Smith
(C) JohnSmith
(D) Smith, John
(E) John C. Smith

```
T3Q15.java                                    _ □ ×
1
2  public class T3Q15
3  {
4      public static void main (String args[])
5      {
6          String firstName = "John";
7          String lastName  = "Smith";
8          String fullName  = firstName + lastName;
9          char space = ' ';
10         System.out.print(fullName);
11     }
12 }
13
```

34. What is the output of this program?

(A) 100
(B) 200
(C) 300
(D) 100200
(E) 100 200

```java
 1
 2  public class T3Q16
 3  {
 4      public static void main (String args[])
 5      {
 6          String firstNumber = "100";
 7          String lastNumber  = "200";
 8          String newNumber   = firstNumber + lastNumber;
 9          char space = ' ';
10          System.out.print(newNumber);
11      }
12  }
13
```

35. What is the output of this program?

(A) 100
(B) 200
(C) 300
(D) 100200
(E) 100 200

```java
 1
 2  public class T3Q17
 3  {
 4      public static void main (String args[])
 5      {
 6          int firstNumber = 100;
 7          int lastNumber  = 200;
 8          int newNumber   = firstNumber + lastNumber;
 9          char space = ' ';
10          System.out.print(newNumber);
11      }
12  }
13
```

36. What is the output of this program?

(A)
```
Grade:            100
PI:               3.141592653589793
Middle Initial:   Q
```

(B)
```
Grade:            101
PI:               2.7182818284590904
Middle Initial:   A
```

(C) No Output

(D) Compiler Error

```java
 1  public class T3Q20
 2  {
 3      public static void main (String args[])
 4      {
 5          final int grade = 100;
 6          final double PI = 3.14159265358979323846264338327950288 4;
 7          final char middleInitial = 'Q';
 8
 9  //      grade++;
10  //      PI = 2.718281828459090452818282 818;
11  //      middleInitial = 'A';
12
13          System.out.println("Grade:           " + grade);
14          System.out.println("PI:              " + PI);
15          System.out.println("Middle Initial:  " + middleInitial);
16          System.out.println();
17      }
18  }
```

37. What is the output of this program?

(A)
```
Grade:            100
PI:               3.141592653589793
Middle Initial:   Q
```

(B)
```
Grade:            101
PI:               2.7182818284590904
Middle Initial:   A
```

(C) No Output

(D) Compiler Error

```java
 1  public class T3Q21
 2  {
 3      public static void main (String args[])
 4      {
 5          final int grade = 100;
 6          final double PI = 3.14159265358979323846264338327950288 4;
 7          final char middleInitial = 'Q';
 8
 9          grade++;
10          PI = 2.718281828459090452818282 818;
11          middleInitial = 'A';
12
13          System.out.println("Grade:           " + grade);
14          System.out.println("PI:              " + PI);
15          System.out.println("Middle Initial:  " + middleInitial);
16          System.out.println();
17      }
18  }
19
```

38. Which of the following is the *single-line* comment symbol?

(A) //
(B) \\
(C) /*
(D) */

39. Which of the following is the *begin-multiple-line* comment symbol?

(A) //
(B) \\
(C) /*
(D) */

40. Which of the following is the *end-multiple-line* comment symbol?

(A) //
(B) \\
(C) /*
(D) */

41. What is the value of x after this statement?

int x = 3 + 7 * 5;

(A) 26
(B) 38
(C) 48
(D) 50
(E) 66

42. What is the value of x after this statement?

int x = 3 + (7 * 5);

(A) 26
(B) 38
(C) 48
(D) 50
(E) 66

43.   What is the value of x after this statement?

int x = (3 + 7) * 5;

(A) 26
(B) 38
(C) 48
(D) 50
(E) 66

---

44.   What is the value of x after this statement?

int x = (4 + 8) / 2;

(A) 2
(B) 4
(C) 6
(D) 8
(E) 12

---

45.   What is the value of x after this statement?

int x = 4 + 8 / 2;

(A) 2
(B) 4
(C) 6
(D) 8
(E) 12

---

46.   What is the value of x after this statement?

int x = 4 + (8 / 2);

(A) 2
(B) 4
(C) 6
(D) 8
(E) 12

47.   What is the value of x after this statement?

int x = 2 / 5;

(A) 0
(B) 0.4
(C) 0.5
(D) 2
(E) 2.5

48.   What is the value of x after this statement?

double x = 2.0 / 5.0;

(A) 0
(B) 0.4
(C) 0.5
(D) 2
(E) 2.5

49.   What is the output of this program segment?

double PI = 3.14159;
System.out.println(PI);

(A) PI
(B) 3.14159
(C) PI = 3.14159
(D) PI = PI
(E) Compile Error

50.   What is the output of this program segment?

double PI = 3.14159;
System.out.println("PI");

(A) PI
(B) 3.14159
(C) PI = 3.14159
(D) PI = PI
(E) Compile Error

51. What is the output of this program segment?

double PI = 3.14159;
System.out.println("PI = " + PI);

(A) PI
(B) 3.14159
(C) PI = 3.14159
(D) PI = PI
(E) Compile Error

52. What is the output of this program segment?

double PI;
System.out.println(PI);

(A) PI
(B) 3.14159
(C) PI = 3.14159
(D) PI = PI
(E) Compile Error

53. What is the output of this program segment?

int q = 11;
q--;
q--;
q--;
q--;
System.out.println(q);

(A) 7
(B) 8
(C) 9
(D) 10
(E) 11

54.   What is the output of this program segment?

int q = 11;
q--;
q++;
q--;
q++;
System.out.println(q);

(A) 7
(B) 8
(C) 9
(D) 10
(E) 11

55.   What is the output of this program segment?

int q = 4;
q *= 2;
System.out.println(q);

(A) 7
(B) 8
(C) 9
(D) 10
(E) 11

56.   What is the output of this program segment?

int q = 24;
q /= 3;
q++;
System.out.println(q);

(A) 7
(B) 8
(C) 9
(D) 10
(E) 11

57. What is the output of this program segment?

```
int q = 24;
q /= 4;
q--;
System.out.println(q);
```

(A) 5
(B) 6
(C) 7
(D) 8
(E) 9

58. What is the output of this program segment?

```
int a = 2;
int b = 3;
a++;
b--;
int c = a + b;
System.out.println(c);
```

(A) 5
(B) 6
(C) 7
(D) 8
(E) 9

59. What is the output of this program segment?

```
int a = 4;
int b = 3;
a *= 3;
b *= 2;
int c = a + b;
System.out.println(c);
```

(A) 6
(B) 7
(C) 12
(D) 18
(E) 72

60.   What is the output of this program segment?

int a, b;
a = b = 30;
a /= 3;
b /= 5;
int c = a - b;
System.out.println(c);

(A) 4
(B) 6
(C) 8
(D) 10
(E) 30