1. To obtain the sine of 35 degrees, use _____.

a. Math.sin(35)

b. Math.sin(Math.toRadians(35))

c. Math.sin(Math.toDegrees(35))

d. Math.sin(Math.toRadian(35))

e. Math.sin(Math.toDegree(35))

2. To obtain the arc sine of 0.5, use _____.

a. Math.asin(0.5)

b. Math.asin(Math.toDegrees(0.5))

c. Math.sin(Math.toRadians(0.5))

d. Math.sin(0.5)

3. Math.asin(0.5) returns _____.

a. 30

b. Math.toRadians(30)

c. Math.PI / 4

d. Math.PI / 2

4. Math.sin(Math.PI) returns _____.

a. 0.0

b. 1.0

c. 0.5

d. 0.4

5. Math.cos(Math.PI) returns _____.

a. 0.0

b. 1.0

c. -1.0

d. 0.5

5. What is Math.round(3.6)?

a. 3.0

b. 3

c. 4

d. 4.0

6. What is Math.rint(3.6)?

a. 3.0

b. 3

c. 4.0

d. 5.0

7. What is Math.rint(3.5)?

a. 3.0

b. 3

c. 4

d. 4.0

e. 5.0

8. What is Math.ceil(3.6)?

a. 3.0

b. 3

c. 4.0

d. 5.0

9. What is Math.floor(3.6)?

a. 3.0

b. 3

c. 4

d. 5.0

10. Which of the following is the correct expression of character 4?

a. 4

b. "4"

c. '\0004'

d. '4'

11. A Java character is stored in _____.

a. one byte

b. two bytes

c. three bytes

d. four bytes

12. The Unicode of 'a' is 97. What is the Unicode for 'c'?

a. 96

b. 97

c. 98

d. 99

13. Which of the following statement prints smith\exam1\test.txt?

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");

14. Suppose x is a char variable with a value 'b'. What is the output of the statement System.out.println(++x)?

a. a

b. b

c. c

d. d

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

a. System.out.println(i);

b. System.out.println((char)i);

c. System.out.println((int)i);

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

16. Will System.out.println((char)4) display 4?

a. Yes

b. No

17. What is the output of System.out.println('z' - 'a')?

a. 25

b. 26

c. a

d. z

18. An int variable can hold _____.

a. 'x'

b. 120

c. 120.0

d. "x"

e. "120"

19. Which of the following assignment statements is correct?

a. char c = 'd';

b. char c = 100;

c. char c = "d";

d. char c = "100";

20. '3' - '2' + 'm' / 'n' is _____.

a. 0

b. 1

c. 2

d. 3

21. To check whether a char variable ch is an uppercase letter, you write _____.

a. (ch >= 'A' && ch >= 'Z')

b. (ch >= 'A' && ch <= 'Z')

c. (ch >= 'A' || ch <= 'Z')

d. ('A' <= ch <= 'Z')

22. Which of the following is not a correct method in the Character class?

a. isLetterOrDigit(char)

b. isLetter(char)

c. isDigit()

d. toLowerCase(char)

e. toUpperCase()

23. Suppose Character x = new Character('a'), _____ returns true.

a. x.equals(new Character('a'))

b. x.compareToIgnoreCase('A')

c. x.equalsIgnoreCase('A')

d. x.equals('a')

e. x.equals("a")

24. Suppose s is a string with the value "java". What will be assigned to x if you execute the following code?

char x = s.charAt(4);

a. 'a'

b. 'v'

c. Nothing will be assigned to x, because the execution causes the runtime error StringIndexOutofBoundsException.

25. The expression "Java " + 1 + 2 + 3 evaluates to _____.

a. Java123

b. Java6

c. Java 123

d. java 123

e. Illegal expression

26. Note that the Unicode for character A is 65. The expression "A" + 1 evaluates to _____.

a. 66

b. B

c. A1

d. Illegal expression

27. Note that the Unicode for character A is 65. The expression 'A' + 1 evaluates to _____.

a. 66

b. B

c. A1

d. Illegal expression

28. Which of the following is the correct statement to return JAVA?

a. toUpperCase("Java")

b. "Java".toUpperCase("Java")

c. "Java".toUpperCase()

d. String.toUpperCase("Java")

29. Suppose s1 and s2 are two strings. Which of the following statements or expressions is incorrect?

a. String s3 = s1 - s2;

b. boolean b = s1.compareTo(s2);

c. char c = s1[0];

d. char c = s1.charAt(s1.length());

30. Suppose s1 and s2 are two strings. What is the result of the following code?

```
s1.equals(s2) == s2.equals(s1)
```

a. true

b. false

31. "abc".compareTo("aba") returns _____.

a. 1

b. 2

c. -1

d. -2

e. 0

32. "AbA".compareToIgnoreCase("abC") returns _____.

a. 1

b. 2

c. -1

d. -2

e. 0

33. _____ returns true.

a. "peter".compareToIgnoreCase("Peter")

b. "peter".compareToIgnoreCase("peter")

c. "peter".equalsIgnoreCase("Peter")

d. "peter".equalsIgnoreCase("peter")

e. "peter".equals("peter")

34. What is the return value of "SELECT".substring(0, 5)?

a. "SELECT"

b. "SELEC"

c. "SELE"

d. "ELECT"

35. What is the return value of "SELECT".substring(4, 4)?

a. an empty string

b. C

c. T

d. E

36. To check if a string s contains the prefix "Java", you may write

a. if (s.startsWith("Java")) ...

b. if (s.indexOf("Java") == 0) ...

c. if (s.substring(0, 4).equals("Java")) ...

d. if (s.charAt(0) == 'J' && s.charAt(1) == 'a' && s.charAt(2) == 'v' && s.charAt(3) == 'a') ...

37. To check if a string s contains the suffix "Java", you may write

a. if (s.endsWith("Java")) ...

b. if (s.lastIndexOf("Java") >= 0) ...

c. if (s.substring(s.length() - 4).equals("Java")) ...

d. if (s.substring(s.length() - 5).equals("Java")) ...

e. if (s.charAt(s.length() - 4) == 'J' && s.charAt(s.length() - 3) == 'a' && s.charAt(s.length() - 2) == 'v' && s.charAt(s.length() - 1) == 'a') ...

38. The _____ method parses a string s to an int value.

a. integer.parseInt(s);

b. Integer.parseInt(s);

c. integer.parseInteger(s);

d. Integer.parseInteger(s);

39. The _____ method parses a string s to a double value.

a. double.parseDouble(s);

b. Double.parsedouble(s);

c. double.parse(s);

d. Double.parseDouble(s);

40. Which of the following are valid specifiers for the printf statement?

a. %4c

b. %10b

c. %6d

d. %8.2d

e. %10.2e

41. The statement System.out.printf("%3.1f", 1234.56) outputs _____.

a. 123.4

b. 123.5

c. 1234.5

d. 1234.56

e. 1234.6

42. The statement System.out.printf("%3.1e", 1234.56) outputs _____.

a. 0.1e+04

b. 0.123456e+04

c. 0.123e+04

d. 1.2e+03

e. 1.23+03

43. The statement System.out.printf("%5d", 123456) outputs _____.

a. 12345

b. 23456

c. 123456

d. 12345.6

44. The statement System.out.printf("%10s", 123456) outputs _____.
(Note: * represents a space)

a. 123456****

b. 23456*****

c. 12345*****

d. ****123456

45. Analyze the following code:

```
int i = 3434; double d = 3434;
System.out.printf("%5.1f %5.1f", i, d);
```

a. The code compiles and runs fine to display 3434.0 3434.0.

b. The code compiles and runs fine to display 3434 3434.0.

c. i is an integer, but the format specifier %5.1f specifies a format for double value. The code has an error.