40 Hard Java MCQs

Topics: Basic Syntax, Data Types, Conditionals, Arrays, Loops, Variables & Scopes, Type Casting, Strings & Methods, Math Operations

1. Which of the following will compile successfully?

    A. public static void main(String args)

    B. public static void main(String[] args)

    C. static public void main(String... args)

    D. Both B and C

2. What is the output?

```
System.out.println("Java" + 1 + 2);
System.out.println(1 + 2 + "Java");
```

    A. Java3 and 3Java

    B. Java12 and 3Java

    C. Java3 and Java12

    D. Error

3. Which identifier is legal in Java?

    A. *amounttotal*

B. for

C. 2value

4. Which of the following statements about 'package' is correct?

    A. It must be the last statement in a file

    B. It must be the first statement (ignoring comments)

    C. It can appear multiple times in a file

    D. It is optional and can appear anywhere

5. Which is true for 'import static'?

    A. Used to import static members of a class

    B. Imports only classes, not methods

    C. Always required to use Math methods

    D. Can only be used with interfaces

6. What is the output?

```
byte b = (byte)130;
System.out.println(b);
```

A. 130

B. -126

C. 126

D. Error

7. Which type can store the largest integer?

A. int

B. long

C. float

D. double

8. Which literal is invalid?

A. 0x1A

B. 07

C. 0b1010

D. 089

9. What is the result?

```
float f = 1/2;
System.out.println(f);
```

A. 0.0

B. 0.5

C. 1.0

D. Error

10. What is the default value of a 'char' instance variable?

A. null

B. ' '

C. \u0000

D. 0

11. What will print?

```
int x = 0;
if (x = 1) System.out.println("A");
else System.out.println("B");
```

A. A

B. B

C. Error

D. Runtime exception

12. Which switch expression is valid?

    A. switch(3.14)

    B. switch("Java")

    C. switch(true)

    D. switch(2L)

13. What is the output?

```
int a = 10;
if (a++ == 10 && ++a == 12)
    System.out.println(a);
```

    A. 10

    B. 11

    C. 12

    D. 13

14. Which operator has higher precedence?

    A.

    B. ——

    C. ?:

    D. =

15. Which is correct?

    A. The else part is always mandatory

    B. Nested if-else is not allowed

    C. A switch can have at most one default

    D. break is mandatory in switch

16. What happens?

```
int[] arr = new int[0];
System.out.println(arr.length);
```

    A. 0

    B. Error

    C. 1

    D. NullPointerException

17. Which is valid?

        A. int[][] arr = new int[2][];

        B. int[2][2] arr = new int[][];

        C. int[][] arr = new int[][2];

        D. int arr[][] = new int[2][2.0];

18. What will print?

```
int[] nums = {1,2,3};
System.out.println(nums[3]);
```

        A. 3

        B. 0

        C. Error

        D. ArrayIndexOutOfBoundsException

19. Which of the following is true?

        A. Arrays are objects

        B. Arrays can change length dynamically

        C. Arrays can use negative indexes

        D. Arrays do not support for-each

20. How to clone an array correctly?

        A. arr.copy()

        B. arr.clone()

        C. Arrays.copyOf(arr)

        D. Both B and C

21. What prints?

```
int i=0;
while(i++ < 3);
System.out.println(i);
```

        A. 3

        B. 4

        C. Infinite loop

        D. Error

22. Which loop executes at least once?

        A. for

B. while

C. do-while

D. None

23. What happens?

```
for(;;) { break; }
```

A. Compile error

B. Infinite loop

C. Executes once and stops

D. Runtime exception

24. Which is valid?

A. for(int i=0; i¡5; i++);

B. while(true) break;

C. do break; while(true);

D. All of the above

25. Which keyword skips current iteration?

A. skip

B. break

C. continue

D. pass

26. What happens?

```
int x;
System.out.println(x);
```

A. 0

B. null

C. Error

D. garbage

27. Which is shared among all objects?

A. instance variables

B. local variables

C. static variables

D. parameters

28. Which is true?

    A. final variables can be reassigned

    B. static variables belong to class

    C. local variables get default values

    D. this can be used in static methods

29. Which is correct?

    A. Instance variables are created on stack

    B. Local variables are stored on heap

    C. Static variables are stored in method area

    D. None

30. What is true?

    A. Local variables must be initialized before use

    B. Local variables are automatically 0

    C. Instance variables must be explicitly initialized

    D. Static variables cannot have default values

31. What is the output?

```
System.out.println("Hello".substring(1,4));
```

    A. Hel

    B. ell

    C. llo

    D. Error

32. Which is immutable?

    A. String

    B. StringBuilder

    C. StringBuffer

    D. char[]

33. Which is true?

    A. Widening conversion is automatic

    B. Narrowing is automatic

    C. Both require casting

    D. Neither possible

34. Which method declaration is valid?

A. void m(int... a)

B. void m(int... a, int b)

C. void m(int a..., int b)

D. void m(int[]... a)

35. Which is correct?

    A. Method overloading depends only on return type

    B. Method overloading depends on parameter list

    C. Method overriding allows changing static

    D. Constructors cannot be overloaded

36. What is the output?

```
System.out.println(10/3);
```

    A. 3.333

    B. 3

    C. 4

    D. Error

37. Which is true?

    A.

    B.

    C. / always gives remainder

    D. * has higher precedence than /

38. Which method returns absolute value?

    A. Math.abs()

    B. Math.ceil()

    C. Math.floor()

    D. Math.signum()

39. What is output?

```
System.out.println(Math.max(5, Math.min(10,2)));
```

    A. 2

    B. 5

    C. 10

    D. Error

40. What is the result?

```
double d = Math.round(2.7);
System.out.println(d);
```

  A. 2

  B. 3

  C. 2.7

  D. Error

Answer Key

1. Both B and C

2. Java12 and 3Java

3. $amount

4. It must be the first statement (ignoring comments)

5. Used to import static members of a class

6. -126

7. long

8. 089

9. 0.0

10. \u0000

11. Error

12. switch("Java")

13. 12

14.

15. A switch can have at most one default

16. 0

17. int[][] arr = new int[2][];

18. ArrayIndexOutOfBoundsException

19. Arrays are objects

20. Both B and C

21. 4

22. do-while

23. Executes once and stops

24. All of the above

25. continue

26. Error

27. static variables

28. static variables belong to class

29. Static variables are stored in method area

30. Local variables must be initialized before use

31. ell

32. String

33. Widening conversion is automatic

34. void m(int... a)

35. Method overloading depends on parameter list

36. 3

37. % gives remainder

38. Math.abs()

39. 5

40. 3