

Certificacion Java

Capitulo Cuatro

Review Questions

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A photograph of a mountain peak, likely Mount Fuji, rising above a thick layer of white clouds. The sky is a soft gradient of pink, orange, and purple, suggesting a sunset or sunrise. The mountain's peak is illuminated by the low sun, creating a warm glow.

1. What is output by the following code? (Choose all that apply.)

```
1: public class Fish {  
2:     public static void main(String[] args) {  
3:         int numFish = 4;  
4:         String fishType = "tuna";  
5:         String anotherFish = numFish + 1;  
6:         System.out.println(anotherFish + " " + fishType);  
7:         System.out.println(numFish + " " + 1);  
8:     } }
```



no se puede asignar un int a un string

si quisieramos hacerlo debería ser:

String hola = ""+2

- A. 4 1
- B. 5
- C. 5 tuna
- D. 5tuna
- E. 51tuna

F. The code does not compile.

2. Which of these array declarations are not legal? (Choose all that apply.)

- A. `int[][] scores = new int[5][];`
- B. `Object[][][] cubbies = new Object[3][0][5];`
- C. `String beans[] = new beans[6];`
- D. `java.util.Date[] dates[] = new java.util.Date[2][];`
- E. `int[][] types = new int[];`
- F. `int[][] java = new int[][];`

C. usa beans como tipo de dato

E y F. No definen tamaño para el array

3. Note that March 13, 2022 is the weekend when we spring forward, and November 6, 2022 is when we fall back for daylight saving time. Which of the following can fill in the blank without the code throwing an exception? (Choose all that apply.)

```
var zone = ZoneId.of("US/Eastern");  
var date = _____;  
var time = LocalTime.of(2, 15);  
var z = ZonedDateTime.of(date, time, zone);
```

A. `LocalDate.of(2022, 3, 13)`

B. `LocalDate.of(2022, 3, 40)`

C. `LocalDate.of(2022, 11, 6)`

→ No hay día 40

Día no válido

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D. `LocalDate.of(2022, 11, 7)`

E. `LocalDate.of(2023, 2, 29)`

F. `LocalDate.of(2022, MonthEnum.MARCH, 13);`

↓
clase Enum no es válida

Las demás opciones dan formatos de fecha válidos

4. Which of the following are output by this code? (Choose all that apply.)

```
3: var s = "Hello";  
4: var t = new String(s);  
5: if ("Hello".equals(s)) System.out.println("one"); one  
6: if (t == s) System.out.println("two"); X  
7: if (t.intern() == s) System.out.println("three"); three  
8: if ("Hello" == s) System.out.println("four"); Four  
9: if ("Hello".intern() == t) System.out.println("five"); X
```

- A. one Linea 5 compara si son iguales
- B. two Revisa si existe una cadena en el pool con el valor de t, es
- C. three cierto y es s
- D. four → Hello existe en el pool, y es por la declaracion de s
- E. five
- F. The code does not compile.
- G. None of the above

5. What is the result of the following code?

```
7: var sb = new StringBuilder();  
8: sb.append("aaa").insert(1, "bb").2insert(4, "ccc");3  
9: System.out.println(sb);
```

- A. abbaaccc 1. aaa
- B. abbaccca 2. abbaa
- C. bbaaaccc 3. abbaccca
- D. bbaaccca
- E. An empty line
- F. The code does not compile.

1. Añade al final aaa

2. Inserta en el Índice 1 bb

3. Inserta en el Índice 4 ccc

6. How many of these lines contain a compiler error? (Choose all that apply.)

23: double one = Math.pow(1, 2);

24: int two = Math.round(1.0);

25: float three = Math.random();

26: var doubles = new double[] {one, two, three};

Retorna un double

Retorna un double

A. 0

B. 1

24,25 generan errores de compilacion al asignar tipos no validos

C. 2

D. 3

E. 4

7. Which of these statements is true of the two values? (Choose all that apply.)

2022-08-28T05:00 GMT-04:00

2022-08-28T09:00 GMT-06:00

- A. The first date/time is earlier.
- B. The second date/time is earlier.
- C. Both date/times are the same.
- D. The date/times are two hours apart.
- E. The date/times are six hours apart.
- F. The date/times are 10 hours apart.

8. Which of the following return 5 when run independently? (Choose all that apply.)

```
var string = "12345";
```

```
var builder = new StringBuilder("12345");
```

- A. `builder.charAt(4)` 5
- B. `builder.replace(2, 4, "6").charAt(3)` 1 2 6 5
- C. `builder.replace(2, 5, "6").charAt(2)` 1 2 6
- D. `string.charAt(5)` fuera de rango
- E. `string.length` faltan Parentesis
- F. `string.replace("123", "1").charAt(2)` 1 4 5
- G. None of the above

9. Which of the following are true about arrays? (Choose all that apply.)

- A. The first element is index 0. Arrays Inician en 0
- B. The first element is index 1.
- C. Arrays are fixed size. su tamaño es fijo, mas no sus valores
- D. Arrays are immutable.
- E. Calling `equals()` on two different arrays containing the same primitive values always returns true.
- F. Calling `equals()` on two different arrays containing the same primitive values always returns false.
- G. Calling `equals()` on two different arrays containing the same primitive values can return true or false.

al llamar equals() compara si son el mismo objeto, no sus valores entonces siempre sera false el resultado

10. How many of these lines contain a compiler error? (Choose all that apply.)

```
23: int one = Math.min(5, 3);  
24: long two = Math.round(5.5);  
25: double three = Math.floor(6.6);  
26: var doubles = new double[] {one, two, three};
```

- A. 0 No hay errores en los codigos
- B. 1
- C. 2
- D. 3
- E. 4

11. What is the output of the following code?

```
var date = LocalDate.of(2022, 4, 3);  
date.plusDays(2);  
date.plusHours(3);  
System.out.println(date.getYear() + " " + date.getMonth()  
    + " " + date.getDayOfMonth());
```

Local Date no tiene horas
por lo que no compila

- A. 2022 MARCH 4
- B. 2022 MARCH 6
- C. 2022 APRIL 3
- D. 2022 APRIL 5
- E. The code does not compile.
- F. A runtime exception is thrown.

12. What is output by the following code? (Choose all that apply.)

```
var numbers = "012345678".indent(1);  
numbers = numbers.stripLeading();  
System.out.println(numbers.substring(1, 3)); 12  
System.out.println(numbers.substring(7, 7)); nada  
System.out.print(numbers.substring(7)); 78
```

- A. 12 El rango final de substring es exclusivo
- B. 123 si solo se indica inicio devuelve de ese punto hasta el fin de la cadena
- C. 7
- D. 78
- E. A blank line
- F. The code does not compile.
- G. An exception is thrown.

13. What is the result of the following code?

```
public class Lion {  
    public void roar(String roar1, StringBuilder roar2) {  
        roar1.concat("!!!");  
        roar2.append("!!!");  
    }  
    public static void main(String[] args) {  
        S var roar1 = "roar";  
        Sb var roar2 = new StringBuilder("roar");  
        new Lion().roar(roar1, roar2);  
        System.out.println(roar1 + " " + roar2);  
    } }  
}
```

- A. roar roar al llamar. roar se intenta modificar roar1 y roar 2
- B. roar roar!!! pero el primero es inmutable por lo que solo se
- C. roar!!! roar modifica roar2
- D. roar!!! roar!!!
- E. An exception is thrown.
- F. The code does not compile.

14. Given the following, which can correctly fill in the blank? (Choose all that apply.)

```
var date = LocalDate.now();  
var time = LocalTime.now();  
var dateTime = LocalDateTime.now();  
var zoneId = ZoneId.systemDefault();  
var zonedDateTime = ZonedDateTime.of(dateTime, zoneId);  
Instant instant = _____;
```

- A. `Instant.now()`
- B. `new Instant()`
- C. `date.toInstant()`
- D. `dateTime.toInstant()`
- E. `time.toInstant()`
- F. `zonedDateTime.toInstant()`

15. What is the output of the following? (Choose all that apply.)

```
var arr = new String[] { "PIG", "pig", "123"};  
Arrays.sort(arr); ordena el array → numeros Mayusculas Minusculas  
System.out.println(Arrays.toString(arr)); 123 PIG pig  
System.out.println(Arrays.binarySearch(arr, "Pippa"));
```

↓
binary search busca en que indice deberia estar la palabra y lo devuelve en negativo, en este caso debería estar en el lugar 3, sería el indice 2 ya que los array indican de 0

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- A. `[pig, PIG, 123]`
- B. `[PIG, pig, 123]`
- C. `[123, PIG, pig]`
- D. `[123, pig, PIG]`
- E. `-3`
- F. `-2`
- G. The results of `binarySearch()` are undefined in this example.

16. What is included in the output of the following code? (Choose all that apply.)

```
var base = "ewe\nsheep\t"; \n y \t cada uno cuenta como uno
int length = base.length(); 11 caracteres
int indent = base.indent(2).length(); agrega 2 espacios en cada linea y una \n
int translate = base.translateEscapes().length(); elimina \ dejando 10
```

```
var formatted = "%s %s %s".formatted(length, indent, translate);
System.out.format(formatted);
```

A. 10

B. 11

C. 12

D. 13

E. 14

F. 15

G. 16

17. Which of these statements are true? (Choose all that apply.)

```
var letters = new StringBuilder("abcdefg");
```

A. `letters.substring(1, 2)` returns a single-character String. ^{0 1 2 3 4 5 6} b

B. `letters.substring(2, 2)` returns a single-character String. ^{0 1 2 3 4 5 6} Fuera de

C. `letters.substring(6, 5)` returns a single-character String.

D. `letters.substring(6, 6)` returns a single-character String. ^{0 1 2 3 4 5 6}

E. `letters.substring(1, 2)` throws an exception. un caracter

F. `letters.substring(2, 2)` throws an exception. ^{0 1 2 3 4 5 6}

G. `letters.substring(6, 5)` throws an exception. Fuera de rango

H. `letters.substring(6, 6)` throws an exception. ^{0 1 2 3 4 5 6}

Repetir el Índice en un substring es valido pero regresa una cadena vacia

El segundo Índice es exclusivo en substring

19. Which of the following fill in the blank to print a positive integer? (Choose all that apply)

```
String[] s1 = { "Camel", "Peacock", "Llama"};  
String[] s2 = { "Camel", "Llama", "Peacock"};  
String[] s3 = { "Camel"};  
String[] s4 = { "Camel", null};  
System.out.println(Arrays._____);
```

A. compare(s1, s2) ++

B. mismatch(s1, s2)

C. compare(s3, s4)

D. mismatch (s3, s4)

E. compare(s4, s4)

F. mismatch (s4, s4)

compare regresa un int positivos los elementos son diferentes y el primero es mas grande

mismatch regresa un int positivo si los arreglos son diferentes en la posicion 1 o mayor

20. Note that March 13, 2022 is the weekend that clocks spring ahead for daylight saving time. What is the output of the following? (Choose all that apply.)

```
var date = LocalDate.of(2022, Month.MARCH, 13);  
var time = LocalTime.of(1, 30);  
var zone = ZoneId.of("US/Eastern");
```

```
var dateTime1 = ZonedDateTime.of(date, time, zone);  
var dateTime2 = dateTime1.plus(1, ChronoUnit.HOURS);
```

2022, March, 13 1:30 US
mismos datos mas una hora
mas una por spring

```
long diff = ChronoUnit.HOURS.between(dateTime1, dateTime2);
```

```
int hour = dateTime2.getHour();
```

```
boolean offset = dateTime1.getOffset()
```

```
== dateTime2.getOffset();
```

```
System.out.println("diff = " + diff);
```

```
System.out.println("hour = " + hour);
```

```
System.out.println("offset = " + offset);
```

A. diff = 1

B. diff = 2

C. hour = 2

D. hour = 3

E. offset = true

F. The code does not compile.

G. A runtime exception is thrown.

21. Which of the following can fill in the blank to print avaJ? (Choose all that apply.)

```
3: var puzzle = new StringBuilder("Java");
```

```
4: puzzle._____;
```

```
5: System.out.println(puzzle);
```

A. `reverse()`

B. `append("vaJ$").substring(0, 4)`

C. `append("vaJ$").delete(0, 3).deleteCharAt(puzzle.length() - 1)`

D. `append("vaJ$").delete(0, 3).deleteCharAt(puzzle.length())`

E. None of the above

Fuera de rango

`reverse()` es la forma mas sencilla de voltear una cadena

lo que hace C es agregar la cadena volteada, borrar la original y eliminar el \$

D. Error de out of Index

B. Solo agrega a la cadena

22. What is the output of the following code?

```
var date = LocalDate.of(2022, Month.APRIL, 30); Es immutable  
date.plusDays(2); estos metodos no se asignan para guardar cambios  
date.plusYears(3);  
System.out.println(date.getYear() + " " + date.getMonth()  
    + " " + date.getDayOfMonth());
```

- A. 2022 APRIL 30 se imprime la fecha inicial
- B. 2022 MAY 2
- C. 2025 APRIL 2
- D. 2025 APRIL 30
- E. 2025 MAY 2
- F. The code does not compile.
- G. A runtime exception is thrown.