



School of Engineeringg  
Even Semester Test-I Session 2027-28  
CS414 Advanced Databases

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Programme:B.Com(Hons)/B.Com(Hons)GlobalFinance  
Duration: 3 minutes  
Maximum Marks: 1

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- a) [Test] What should be evaluated when refactoring a method that occasionally throws `ArrayIndexOutOfBoundsException`?  
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A. Checking the array size before every access  
B. Ensuring that array indices start from 1 instead of 0  
C. Replacing all array accesses with `ArrayList` to avoid exceptions  
D. Using loops that run within the bounds of the array
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OR

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- b) [Test] If an array 'data' has a length of 10, which index would throw an `ArrayIndexOutOfBoundsException` when accessed?  
  
A. 9  
B. 5  
C. -1  
D. 10
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c) Consider the C function given below.

10

3

```
1 | int f(int j)
2 | {
3 |     static int i = 50;
4 |     int k;
5 |     if (i == j)
6 |     {
7 |         printf("something");
8 |         k = f(i);
9 |         return 0;
10 |    }
11 |    else return 0;
12 | }
```

Which one of the following is TRUE?

- A. The function returns 0 when j = 50.
- B. The function will exhaust the runtime stack or run into an infinite loop when j = 50
- C. The function returns 0 for all values of j.
- D. The function prints the string something for all values of j.

**OR**

Q 2) [Test] Evaluate the decision to use System.arraycopy() over a manual loop to copy elements between two arrays from the perspective of exception handling.

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E

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- A. System.arraycopy() is a native method and doesn't throw exceptions, making it safer.
- B. Manual loops provide more control over the copy process, making it easier to handle exceptions.
- C. System.arraycopy() is faster but can still throw IndexOutOfBoundsException, requiring careful parameter validation.
- D. Using manual loops increases the chances of human error, potentially causing more exceptions.

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- Q 3) [Test] What will happen if you try to compile and run the following code snippet? `int[] array = new int[5]; System.out.println(array[5]);` 5 U 3
- A. It will print `&#39;null&#39;`;  
B. It will print `&#39;0&#39;`;  
C. It will throw an `ArrayIndexOutOfBoundsException`.  
D. It will compile and run without any issues.

OR

- Q 4) [Test] When evaluating the performance implications of error handling in array processing, which aspect is likely to contribute the most to runtime overhead? 5 E
- A. The size of the array being processed  
B. The frequency of `ArrayIndexOutOfBoundsException` being thrown and caught  
C. The use of a for-each loop instead of a traditional for loop  
D. The complexity of the algorithm that doesn't involve array access

## Section 2

sample

Please attempt any 2 questions:

- Q 5) Group Question 3 with common cirteira
- a) [Test] Imagine a Java method designed to remove a specific value from an unsorted integer array. Which of the following evaluations is correct if the method always removes the first occurrence of the value? 1 E 3
- A. The method is efficient since it stops after the first removal.  
B. The method can potentially leave other occurrences of the value in the array.  
C. The method guarantees that all occurrences of the value will be removed.  
D. The method is incorrect because it doesn't account for the unsorted nature of the array.

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- b) [Test] When evaluating array copying techniques, which of the following would ensure that modifying the new array does not affect the original array? 1 E 3
- A. Using assignment operator (arrayNew = arrayOriginal) to copy arrays.
  - B. Using System.arraycopy() for array copying.
  - C. Using clone() method for copying the array.
  - D. Using Arrays.copyOf() method for copying the array.

Q 7) What is the output of the below program? 10 3

```
1 | #include <stdio.h>
2 | int main()
3 | {
4 |     int i = 0;
5 |     switch (i)
6 |     {
7 |         case '0': printf("IndiaQuiz");
8 |             break;
9 |         case '1': printf("India");
10 |            break;
11 |         default: printf("Quiz");
12 |     }
13 |     return 0;
14 | }
```

- A. Compile Time Error
- B. IndiaQuiz
- C. India
- D. Quiz

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