Started on	Sunday, 16 February 2025, 7:04 PM
State	Finished
Completed on	Sunday, 16 February 2025, 7:07 PM
Time taken	2 mins 45 secs
Marks	21.00/21.00
Grade	**100.00** out of 100.00
Feedback	Congratulations!!! You have passed by securing more than 80%

Question 1

1.00/1.00

String s1 = null;   ⇕

✔   is the valid declaration of a String.

Your answer is correct.

The correct answer is:

[String s1 = null;] is the valid declaration of a String.

Question 2

1.00/1.00

```
class Output
{
public static void main(String args[])
{
int a1[] = new int[10];
int a2[] = {1, 2, 3, 4, 5};
System.out.println(a1.length + " " + a2.length);
}
}
```

Select one:

● a. 10 5 ✔

● b. 5 10

● c. 0 10

● d. 0 5

Array a1 is created so as to contain 10 integer elements. Hence, the length is 10.

Array a2 is initialized with 5 values. . Hence, the length is 5.

The correct answer is: 10 5

Question 3

1.00/1.00

_____ is used to allocate memory to array variable in Java

Select one:
- a. malloc
- b. new✔
- c. alloc
- d. calloc

Your answer is correct.

The correct answer is:
new

Question 4

1.00/1.00

Given a one dimensional array arr, what is the correct way of getting the number of elements in arr is

arr.length

✔

Your answer is correct.

The correct answer is:

Given a one dimensional array arr, what is the correct way of getting the number of elements in arr is
[arr.length]

Question 5

1.00/1.00

Predict the output

```java
class String_demo
    {
        public static void main(String args[])
        {
            int ascii[] = { 65, 66, 67, 68};
            String s = new String(ascii, 1, 3);
            System.out.println(s);
        }
    }
```
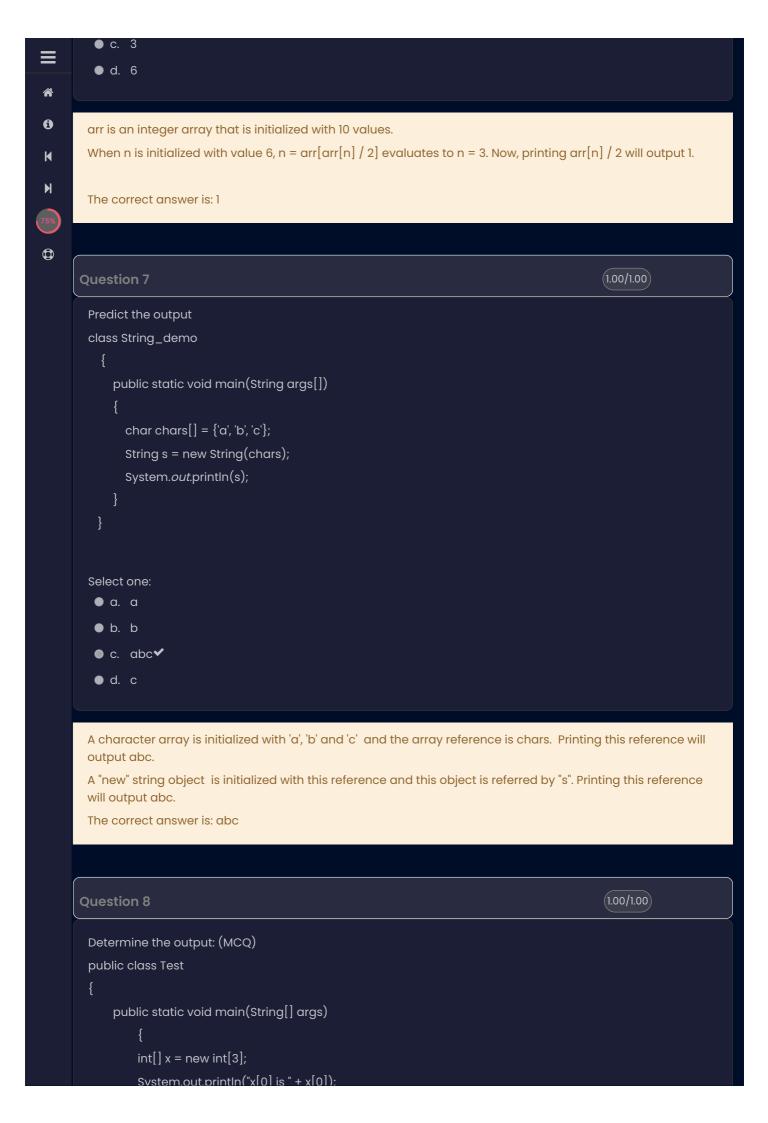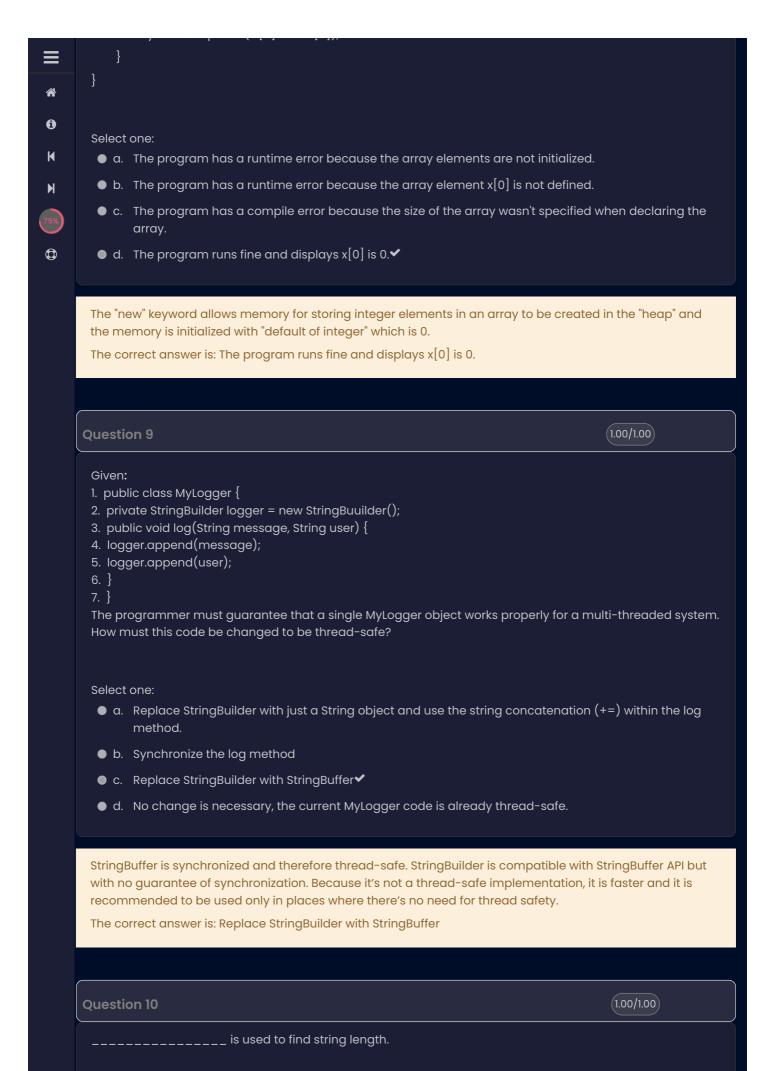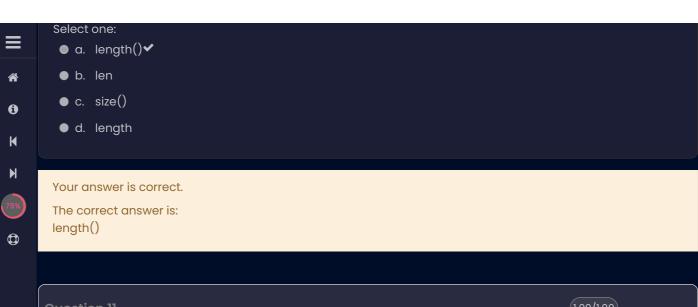
Select one:
- a. ABCD
- b. ABC
- c. CDA
- d. BCD✔

An integer array is initialized with values 65, 66, 67 and 68. Its reference is "ascii". A new string object is initialized with this reference such that the elements from index 1 through 3 alone gets copied as "characters". This object is referred by "s". Printing this object will output BCD which are the char-equivalents of 66, 67 and 68.

The correct answer is: BCD

Question 6
(1.00/1.00)

Determine the output:

```java
class Evaluate
{
        public static void main(String args[])
        {
                int arr[] = new int[] {0 , 1, 2, 3, 4, 5, 6, 7, 8, 9};
                int n = 6;
                n = arr[arr[n] / 2];
                System.out.println(arr[n] / 2);
        }
}
```

Select one:
- a. 0
- b. 1✔

c. 3

d. 6

Question 7

1.00/1.00

Predict the output

```
class String_demo
    {
        public static void main(String args[])
        {
            char chars[] = {'a', 'b', 'c'};
            String s = new String(chars);
            System.out.println(s);
        }
    }
```

Select one:

a. a

b. b

c. abc✔

d. c

Question 8

1.00/1.00

Determine the output: (MCQ)

```
public class Test
{
    public static void main(String[] args)
    {
        int[] x = new int[3];
        System.out.println("x[0] is " + x[0]);
```

```
        }
    }
}
```

Select one:

○ a. The program has a runtime error because the array elements are not initialized.

○ b. The program has a runtime error because the array element x[0] is not defined.

○ c. The program has a compile error because the size of the array wasn't specified when declaring the array.

○ d. The program runs fine and displays x[0] is 0.✔

The "new" keyword allows memory for storing integer elements in an array to be created in the "heap" and the memory is initialized with "default of integer" which is 0.

The correct answer is: The program runs fine and displays x[0] is 0.

Question 9

(1.00/1.00)

Given:

```
1. public class MyLogger {
2.   private StringBuilder logger = new StringBuuilder();
3.   public void log(String message, String user) {
4.     logger.append(message);
5.     logger.append(user);
6.   }
7. }
```

The programmer must guarantee that a single MyLogger object works properly for a multi-threaded system. How must this code be changed to be thread-safe?

Select one:

○ a. Replace StringBuilder with just a String object and use the string concatenation (+=) within the log method.

○ b. Synchronize the log method

○ c. Replace StringBuilder with StringBuffer✔

○ d. No change is necessary, the current MyLogger code is already thread-safe.

StringBuffer is synchronized and therefore thread-safe. StringBuilder is compatible with StringBuffer API but with no guarantee of synchronization. Because it's not a thread-safe implementation, it is faster and it is recommended to be used only in places where there's no need for thread safety.

The correct answer is: Replace StringBuilder with StringBuffer

Question 10

(1.00/1.00)

_____ is used to find string length.

Select one:
- a. length()✔
- b. len
- c. size()
- d. length

Your answer is correct.

The correct answer is:
length()

Question 11

1.00/1.00

Determine the output:

```java
public class Test
{
    public static void main(String[] args)
    {
        int[] x = {1, 2, 3, 4};
        int[] y = x;
        x = new int[2];
            for(int i = 0; i < x.length; i++)
            System.out.print(y[i] + " ");
    }
}
```

Select one:
- a. 0 0
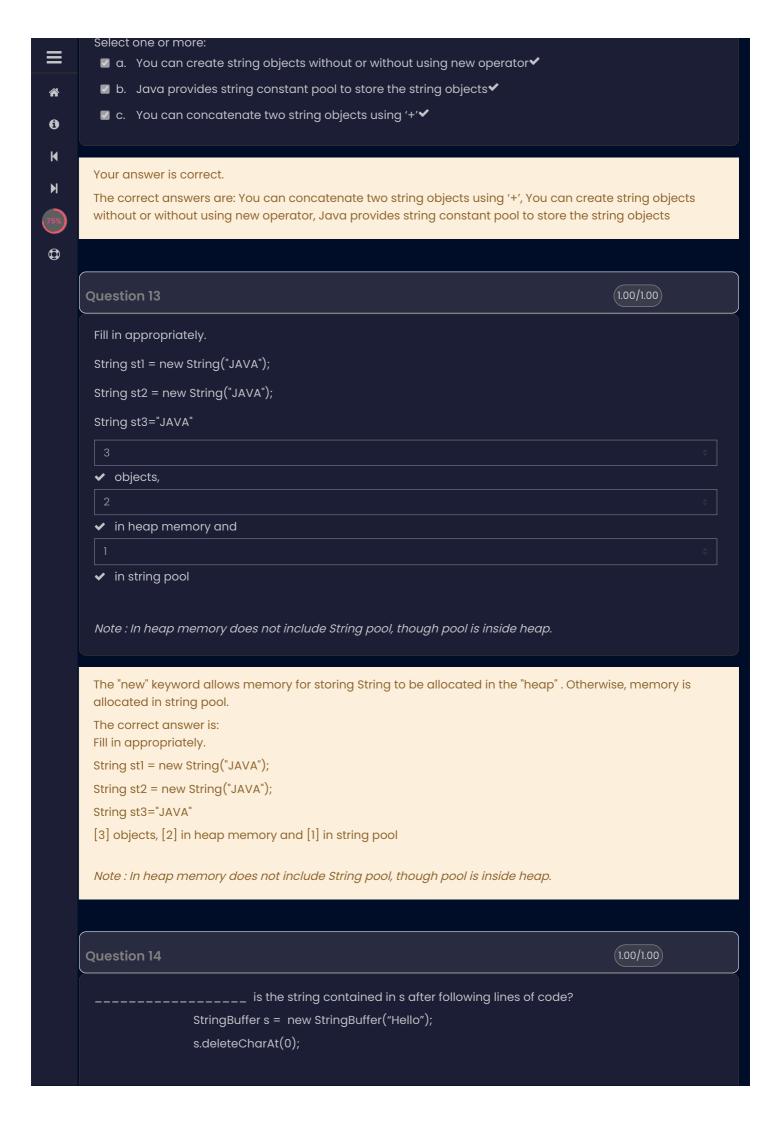- b. 1 2✔
- c. 1 2 3 4
- d. 0 0 0 0

Array x is initialized with 4 values and this means reference "x" contains the starting address of the array. This address is copied to the array reference "y". This mean the 4 values can now be accessed with "y" as well. Then the reference x is assigned with a new array's starting address whose length is 2. Hence the iteration outputs 1 2

The correct answer is: 1 2

Question 12

1.00/1.00

What is special about string objects as compared to objects of other derived types?

Select one or more:

- ☑ a. You can create string objects without or without using new operator ✔
- ☑ b. Java provides string constant pool to store the string objects ✔
- ☑ c. You can concatenate two string objects using '+' ✔

Your answer is correct.

The correct answers are: You can concatenate two string objects using '+', You can create string objects without or without using new operator, Java provides string constant pool to store the string objects

Question 13

1.00/1.00

Fill in appropriately.

String st1 = new String("JAVA");

String st2 = new String("JAVA");

String st3="JAVA"

| 3 | ⇕ |

✔ objects,

| 2 | ⇕ |

✔ in heap memory and

| 1 | ⇕ |

✔ in string pool

Note : In heap memory does not include String pool, though pool is inside heap.

The "new" keyword allows memory for storing String to be allocated in the "heap" . Otherwise, memory is allocated in string pool.

The correct answer is:
Fill in appropriately.

String st1 = new String("JAVA");

String st2 = new String("JAVA");

String st3="JAVA"

[3] objects, [2] in heap memory and [1] in string pool

Note : In heap memory does not include String pool, though pool is inside heap.

Question 14

1.00/1.00

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ is the string contained in s after following lines of code?

StringBuffer s = new StringBuffer("Hello");

s.deleteCharAt(0);

Select one:
- a. llo
- b. hell
- c. Hel
- d. ello ✔

Your answer is correct.

The correct answer is:
ello

Question 15

What will be the content of array variable table after executing the following code?

```java
public class Trial
{
        public static void main(String[] args)
        {
        int []table[]=new int[5][5];
        for(int i = 0; i < 3; i++)
        {
                for(int j = 0; j < 3; j++)
                {
                        if(j == i)
                        {
                                table[i][j] = 1;
                                System.out.print(table[i][j]);
                        }
                else
                        {
                                table[i][j] = 0;
                                System.out.print(table[i][j]);
                        }

                }
        System.out.println("\n");
        }
    }
}
```

Select one:
- a. 1 0 0 ✔
  0 1 0
  0 0 1

○ b. Compilation error

○ c.
```
0 0 0
0 0 0
0 0 0
```

○ d.
```
1 0 0
1 1 0
1 1 1
```

"table" is a 2 dimensional array with 5 rows and 5 columns. It is iterated from 0 through 3 and during each iteration j==i (iteration variables) is checked. When j==i evaluates to true, the index is assigned the value "1" and printed. Else, assigned "0"' and printed.

The correct answer is:
```
1 0 0
0 1 0
0 0 1
```

Question 16

1.00/1.00

What will s2 contain after following lines of code?

String s1 = "one";

String s2 = s1.concat("two");

Select one:

○ a. one

○ b. onetwo✔

○ c. twoone

○ d. two

The string "two" referred by s2 is "concatenated to" the string "one" referred by s1.

The correct answer is: onetwo

Question 17

1.00/1.00

Determine the output

```
class array_output
{
        public static void main(String args[])
        {
                char array_variable [] = new char[10];
                for (int i = 0; i < 10; ++i)
                {
                        array_variable[i] = 'i';
                        System.out.print(array_variable[i] + "");
                }
        }
}
```

Select one:

- a. 0 1 2 3 4 5 6 7 8 9 10
- b. i j k l m n o p q r
- c. i i i i i i i i i i✔
- d. 1 2 3 4 5 6 7 8 9 10

array_variable is a character array that can hold 10 characters. The for loop gets iterated for 10 times. During each iteration, the array index is assigned with the character "i" and printed alongside. Hence the output "iiiiiiiiii".

The correct answer is: i i i i i i i i i i

Question 18   1.00/1.00

+ operator can be used to concatenate two or more String objects in java. State true or false.

Select one:

- True ✔
- False

The correct answer is 'True'.

Question 19   1.00/1.00

Column size is mandatory to create an array in java. State true or false

Select one:

- True
- False ✔

Question 20

1.00/1.00

Determine the output

```
public class Trial
{
public static void main(String[] args)
        {
                int arr[4]={};
                System.out.print(arr[0]);
        }
}
```

Select one:

- a. Compile time error ✔
- b. Garbage error
- c. 0
- d. Runtime error

Question 21

1.00/1.00

Determine the output:

```
public class A
{
public static void main(String argv[])
{
 int ary[]=new int[]{1,2,3};
System.out.println(ary[1]);
}
}
```

Select one:

- a. 2 ✔
- b. 1
- c. Compilation Error:incorrect syntax

The array ary is initialized with 3 elements and the element at the first index is 2.

The correct answer is: 2