The Brigade School Unit Test 1(2020-21)
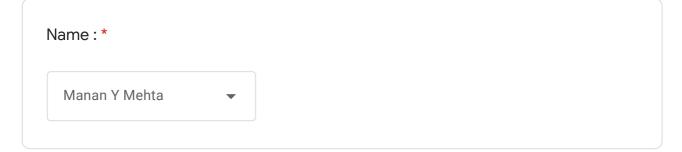
Total points   46/50   ?
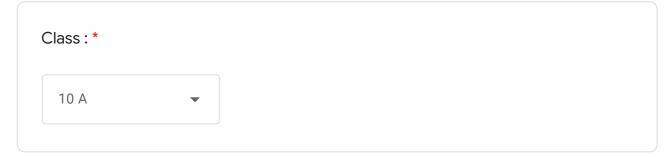
Class 10   Subject:Computer Applications   Max Marks: 50

Email address *

mananmehtabatman@gmail.com

School : *

TBSG ▾

Name : *

Manan Y Mehta ▾

Class : *

10 A ▾

Part A(Marks: 20)

✓   **Question 1 (a) Which one of the following is a valid statement? ***   2/2

○   char[] c = new char()

◉   char[] c = new char[5]   ✓

○   char[] c = new char(4)

○   char[] c = new char[]

Question 1 (b)
Determine output:
int[] x = { 120,200,16};
for(int i = 0; i < x.length; i++)
System.out.print(x[i] + " ");

✓   **Question 1 (b) ***   2/2

◉   120 200 16   ✓

○   12020014

○   120

○   200

○   16

○   error.

Question 1 (c)
Determine output:
int[] x = {1, 2, 3, 4};
int[] y = x;
for(int i = 0; i < x.length; i++)
System.out.print(y[i] + " ");

✓ Question 1 (c) * 2/2

◉ 1 2 3 4 ✓

◯ 0 0 0 0

◯ 1 2

◯ 0 0

✓ Question 1 (d) Which of the following will declare, construct, and initialize 2/2
an array? *

◯ int [] myList = {}

◯ int [] myList = (5, 8, 2)

◯ int myList [] [] = {4,9,7,0}

◉ int myList [] = {4, 3, 7} ✓

Question 1 (e)
What is the result of compiling and running the following code?
int[] a = new int[0];
System.out.print(a.length);

✓ Question 1 (e) * 2/2

◉ 0 ✓

◯ Compilation error, arrays cannot be initialized to zero size

◯ Compilation error, it is a.length() not a.length

◯ None of the above

✓ Question 2 (a) Which element is num[9] of the array num? * 2/2

○ 8

○ 9

◉ 10 ✓

○ none

Question 2 (b) Identify the searching / the sorting technique.
(i) Data is less and is unsorted
(ii) adjacent pairs of objects in the array are compared and swapped if they are not in the correct order.

✓ Question 2 (b) * 2/2

☐ binary search

☑ linear search ✓

☑ bubble sort ✓

☐ selection sort

✓ Question 2 (c) An Array in Java is a collection of elements of ___ data type. * 2/2

☐ a) multiple

☑ b) similar ✓

☐ both a & b

☐ none

✓ Question 2 (d) In Java language, an array index starts with ___. *   2/2

☐ -1

☑ 0   ✓

☐ 1

☐ length

Question 2 (e) What is the output of the below Java program?
int[] marks = {35,65,95};
System.out.print(marks.length + "," + marks[1]);

✓ Question 2 (e) *   2/2

◯ 2,65

⦿ 3,65   ✓

◯ 3,95

◯ 2,95

Part B(Marks: 30)

✓ Question 3: Write a program to search a given element using Linear search Technique. * 15/15

```java
import java.util.*;
class l_search
{
public static void main(String args[])
{
Scanner sc=new Scanner(System.in);
System.out.println("Enter the numbers");
int a[] = new int[10];
int i=0;
int n=0;
int k=0;
for(i=0;i<10;i++)
{
a[i]=sc.nextInt();
}
System.out.println("Enter the number to be searched");
int x=sc.nextInt();
for(i=0;i<10;i++)
{
if(a[i]==x)
{
n=i;
k=1;
break;
}
}
if(k==1)
{
System.out.println("The number is found at array index "+n);
}
else
{
System.out.println("The entered number is not present in the array");
}
}
}
```

VARIABLE DESCRIPTION TABLE

Variable's name -- Datatype -- Description
a[10] -- int -- SDA to store 10 numbers
i -- int -- Loop variable
n -- int -- Stores the index of the number if present
k -- int -- Helps to print the index of the number if present

✗   Question 4: Write a program to sort the given elements in descending   11/15
      order using Bubble sort. *

```
import java.util.*;
class b_sort
{
public static void main(String args[])
{
Scanner sc = new Scanner(System.in);
System.out.println("Enter the array elements");
int a[] = new int[10];
int i=0;
int j=0;
int temp=0;
for(i=0;i<10;i++)
{
a[i]=sc.nextInt();
}
for(i=0;i<10;i++)
{
for(j=i+1;j<10;j++)
{
if(a[i]<a[j])
{
temp=a[i];
a[i]=a[j];
a[j]=temp;
}
}
}
System.out.println("Descending Order");
{
for(i=0;i<a.length;i++)
{
System.out.print(a[i]+" ");
}
}
}
}
```

VARIABLE DESCRIPTION TABLE

Variable's Name -- Datatype -- Description
a[10] -- int -- SDA to store 10 elements
i -- int -- Outerloop variable
j -- int -- Innerloop Variable
temp -- int -- Helps to sort(by swaping) the variables

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