1: The First Problem

(a) What is the output for the below code ?

Modified accordingly if compilation fails with an error

```java
public class Test {

        public static void main(String[] args){
        String value = "abc";
        changeValue(value);
        System.out.println(value);
}
public static void changeValue(String a){
        a = "xyz";
}
}
```

Answer abc

Explanation: Java pass reference as value. passing the object reference, and not the actual object itself. Simply reassigning to the parameter used to pass the value into the method will do nothing, because the parameter is essentially a local variable.

2: The Second Problem

(a) What will be the result of compiling and running the following program? Modified accordingly if compilation fails with an error

```java
import java.util.Date;

public class Employee {
        private String firstName, lastName;
        private Date hireDate;

        public Employee(String fn, String ln) {
                this(fn, ln, new Date());
                System.out.println("Inside first constructor");
        }

        public Employee(String fn, String ln, Date hd) {
                System.out.println("Inside second constructor");
                firstName = fn;
                lastName = ln;
                hireDate = hd;
        }
        public static void main(String args[])
        {
```

```
                    Employee  e  =  new  Employee(" Beetle ",  "Bailey ");
        }
}
```

Answer

Inside second constructor

Inside first constructor

3: The Third problem

(a) What is the output of this program?

```
            public  static  void  main( String  args [])
            {
                int  ascii []  =  {  65,  66,  67,  68};
                String  s  =  new  String ( ascii ,  1,  3);
                System . out . println (s );
            }
        }
```

Answer BCD

Explanation: ascii is an array of integers which contains ascii codes of Characters A, B, C, D. String(ascii, 1, 3) is an constructor which initializes s with Characters corresponding to ascii codes stored in array ascii, starting position being given by 1 & ending position by 3, Thus s stores BCD.

4: The Fourth problem

(a) What is the output of this program?

```
        int  i ;
        int  j ;

        A()  {
                i  =  1;
                j  =  2;
            }
        }
        class  Output  {
            public  static  void  main( String  args [])
            {
                A  obj1  =  new  A ();
                System . out . print ( obj1 . toString ());
            }
        }
```

Answer String associated with obj1 Explanation: toString() is method of class Object, since it is superclass of every class, every object has this method. toString() returns the string associated with the calling object.

5: The Fifth problem

(a) What is the output of this program?

```
public static void main(String args[])
{
    char chars[] = {'a', 'b', 'c'};
    String s = new String(chars);
    String s1 = "abcd";
    int len1 = s1.length();
    int len2 = s.length();
    System.out.println(len1 + " " + len2);
}
}
```

Answer 4 3