CHRIST UNIVERSITY, BANGALORE – 560 029
MID SEMESTER EXAMINATION: JANUARY 2018
IV UG

PROGRAMME NAME: BSc CME&CMS   MAX .MARKS:50 Marks
COURSE NAME: Object Oriented Programming using JAVA   TIME: 2 HRS
COURSE CODE: CSC431

INSTRUCTIONS

- All rough work should be done in the answer script. Do not write or scribble in the question paper except your register number.
- Verify the Course code / course title & number of pages of questions in the question paper.
- Make sure your mobile phone is switched off and placed at the designated place in the hall
- Malpractices will be viewed very seriously.
- Answers should be written on both sides of the paper in the answer book. No sheets should be detached from the answer book
- Answers without the question numbers clearly indicated will not be valued. No page should be left blank in the middle of the answer book

Section A

Answer All Questions   (5*2=10)

1) Classify the different types of variables in JAVA.
2) What are the differences between the following two statements?
   i) String s1=new String ("Hello");
      String s2=new String ("Hello");
   ii) String s1="Hello";
      String s2="Hello";
3) Write the output for the following program

```
class a {
public static void main(String args[])
int a,b;
a=5>>2;
b=6<<1;
System.out.println(a);
System.out.println(b);
} }
```

4) Can a class extend more than one classes or does java support multiple inheritance? Give reason.
5) Identify and explain the error in the following code

```
class Animal{
void eat(){System.out.println("eating...");}
}
class Dog extends Animal{
void bark(){System.out.println("barking...");}
}
classTestInheritance{
public static void main(String args[]){
Animal d=new Animal();
d.bark();
d.eat();
}}
```

Answer any four questions

6) OOP is advantageous over Structured Programming. List the benefits and applications of the same.
7) Explain Java Features in detail.
8) Analyze the major differences between C++ and JAVA.
9) Create a class named 'Programming'. While creating an object of the class, if nothing is passed to it, then the message "I like programming languages" should be printed. If some String is passed to it, then in place of "programming languages" the name of that String variable should be printed.
   For example, while creating object if we pass "Christ University", then "I like Christ University" should be printed.
10) With an example demonstrate the usage of 'super' keyword in JAVA.
11) Infer and explain the output of the following program

```
class Base {
 public void Print() {
System.out.println("Basc");
 } }
class Derived extends Base {
 public void Print() {
 System.out.println("Derived");
}}
class Main{
public static void DoPrint( Base s ) {
s.Print();    }
public static void main(String[] args) {
 Base x = new Base();
 Base y = new Derived();
 Derived z = new Derived();
DoPrint(x);
DoPrint(y);
DoPrint(z);
 }}
```

Section C

Answer any one question

(1*10=10)

12) Demonstrate the concept of Arrays in JAVA with suitable program.
13) A company wants to transmit the data confidentially. All of its data are transmitted as four-digit integers. Write a JAVA program to read a four-digit integer entered by user and encrypt it as follows: replace each digit by (the sum of that digit plus 7) modules 10. Then swap the first digit with third and swap second digit with fourth and finally display the encrypted integer

Section D

Answer any one question

(1*10=10)

14) Explain the JAVA Control statements with appropriate syntax.
15) Illustrate the types of Inheritance in JAVA with a suitable example.