

Enrol. No.

S	R	H	U											
---	---	---	---	--	--	--	--	--	--	--	--	--	--	--

Regn. No.

D	D													
---	---	--	--	--	--	--	--	--	--	--	--	--	--	--

END SEMESTER EXAMINATION, MAY/JUNE - 2019**MCA THIRD SEMESTER****COURSE CODE: MCA204****COURSE TITLE: JAVA PROGRAMMING****[Time allotted: Three hours]****[Max. Marks: 100]****Note:** Attempt all Sections & Questions.**Section (A)****Q.1. Attempt all questions.****(2 x 10 = 20)**

- a. What if I write static public void instead of public static void?
- b. What is a difference between String and StringBuffer Class?
- c. What is synchronized method and why it is needed?
- d. Write about the package for JDBC connectivity.
- e. Write a program to count no of command line arguments.
- f. What will happen when you attempt to compile and run the following code?

```
public class As{
    inti = 10;
    int j;
    char z= 1;
    boolean b;
    public static void main(String argv[]){
        As a = new As();
        a.amethod();
    }
    public void amethod(){
        System.out.println(j);
        System.out.println(b);
    }
}
```

- g. What will happen when you attempt to compile and run the following code, justify your answer?

```
public class Logic {
    public static void main(String args[]) {
        inti = 0;
        int j = 0;
        boolean t = true;
        boolean r;
        r = (t && 0<(i+=1));
        r = (t && 0<(i+=2));
        r = (t && 0<(j+=1));
        r = (t || 0<(j+=2));
        System.out.println(i + " " + j );
    }
}
```

- h. What will happen when you attempt to compile and run the following code?

```
while(1){}
```
- i. Java says "write once, run anywhere". Comment?
- j. Does garbage collection guarantee that a program will not run out of memory?

Section (B)

Q.2. Attempt any 5 questions.

(7 x 5 = 35)

- a. What do you mean by command line Argument and also Write a program to accept number through Command line and display its factorial?
- b. Are constructors inherited? Can a subclass call the parent's class constructor? When and how?
- c. Why do we need Layout Manager, explain Card Layout with example?
- d. What is JAVA API? How do we create n use collection of interfaces and classes in JAVA?
- e. What is Thread Priority? Write a program to demonstrate the priority of threads?
- f. Explain polymorphism in detail, also write a program to implement it.
- g. Discuss applet with its life cycle, write a program to implement it?

Section (C)

Attempt any 3 questions.

(15 x 3 = 45)

- Q.3.**
 - a. What does the keyword "synchronize" mean in java. When do you use it? What are the disadvantages of synchronization? write a program to achieve synchronization in JAVA?
 - b. Explain the architecture for servlets with a neat diagram. Illustrate each component of servlet.
- Q.4.**
 - a. Describe the usage of ByteStream classes with examples. Also write a program to display the content of a file on monitor as well as copy it to the other file.
 - b. Define try-catch, finally, throws, throw with example.
- Q.5.**
 - a. What is an event delegation model, also write a program to implement Key Listener and Action Listener.
 - b. Explain Inheritance with all its type and example?
- Q.6.**
 - a. How to declare, initialize and define array in JAVA
 - b. Write a program to input n numbers using arrays and then print the sum of them, try to access an array variable which is outside the array index and then handle the "ArrayIndexOutOfBounds" exception. If user enter the value of n as 0, then show how JAVA can also create zero element array and handle the "DivisionByZero" exception.
- Q.7.**
 - a. Define Border Layout Manager and also write advantage do Java's layout managers provide over traditional windowing systems?
 - b. What do you mean by nested class, explain it with example?
