

Reg. No.									
----------	--	--	--	--	--	--	--	--	--



MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

IV SEMESTER B.TECH. DEGREE

END SEMESTER EXAMINATIONS, APRIL/MAY 2019

SUBJECT: PROGRAMMING IN JAVA (open elective) [CSE 3290]
REVISED CREDIT SYSTEM
(07/05/2019)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL FIVE FULL** questions.
- ❖ Missing data may be suitably assumed.

- 1A.** Write the general form of writing the for-each version of the for loop and explain the same with an example code. **3M**
- 1B.** Define constructors in a class. What are the special features of constructors? Write a simple program to explain constructors and parameterized constructors. **4M**
- 1C.** What do you mean by short circuit logical operators? With an example, explain short circuit logical operators in Java. **3M**
- 2A.** What is the difference between overloading and overriding? Explain with suitable example programs. **4M**
- 2B.** Why are packages used? Give one example program and explain how to create, use and run a packaged program. **3M**
- 2C.** Explain 'interfaces' in java with an example. How interfaces are useful in achieving run-time polymorphism? **3M**
- 3A.** Define exception. Distinguish between checked and unchecked exceptions. Write a program which contains one method which will throw `IllegalAccessExpection` and use proper exception handlers so that exception should be printed, when this method is called. **4M**
- 3B.** What will be the output of the following error free program? **2M**

```
class LabeledBreak
{
    public static void main(String[] args)
    {
        first:
        for( int i = 1; i < 5; i++)
```

```

        {
second:
        for(int j = 1; j < 3; j ++ ) {
            System.out.println("i = " + i + ":j = " +j);
            if ( i == 2)
                break first;
        }
    }
}

```

- 3C.** What is the need for synchronization? With an example program explain synchronized method. **4M**
- 4A.** Mention the order of invocation of constructors in multilevel hierarchy. **3M**
- 4B.** What are pre-defined streams in Java? Explain. Write a Java program to create a file "file1.txt" and write your name into it using character-oriented stream. **3M**
- 4C.** What are events, event sources and event listeners? Explain the advantage of delegation event model used in java. **4M**
- 5A.** Explain the life cycle of an applet with the help of an applet skeleton. **4M**
- 5B.** Illustrate anonymous inner class with the help of a program which displays the message "mouse pressed" in the status bar of the applet viewer when the mouse is pressed. **3M**
- 5C.** What are the two different uses of the keyword final with Inheritance? Explain with the relevant example. **3M**