

Roll No.

Total No. of Pages: 02

Total No. of Questions: 09

MCA (2015 & Onwards) (Sem. – 3)

**JAVA PROGRAMMING**

M Code: 74076

Subject Code: MCA-304

Paper ID: [74076]

Time: 3 Hrs.

Max. Marks: 60

**INSTRUCTIONS TO CANDIDATES:**

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

**SECTION A**

1. Explain OOPS in detail. What are differences between JAVA and C++? (6,4)
2. a) Explain the control statements with an example. (5,5)  
b) Describe the various Data Types used in Java with suitable examples.

**SECTION B**

3. What is the difference between a class and interface? Write a program in java to illustrate the implementation of multiple inheritance through interfaces. (10)
4. Write notes on: Packages, Scanner Classes, and Stream classes with example. (10)

**SECTION C**

5. a) Explain the Graphics Class in detail with example. (6, 4)  
b) Write notes on: Swings and JDBC.
6. What is an Applet? What are different types of Applets? Write a Program to show parameters passing to applets. (10)

### **SECTION D**

- 7. Explain the Servlet Life Cycle in detail. (10)
- 8. Differentiate the following: (10)
  - a) TCP and UDP Sockets
  - b) doGet and doPost method

### **SECTION E**

- 9. Write short notes on the following with help of example/diagram if needed:
  - a) HttpServlet Response
  - b) Semantics
  - c) Servlet Exception
  - d) Method Overloading
  - e) Operators
  - f) Scope of variable
  - g) Type Casting
  - h) Final Class
  - i) Panels
  - j) String Tokenizer (2x10)