

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**MCA (2013 & 2019 Batch) (Sem.-3)**  
**JAVA PROGRAMMING**  
Subject Code : MCA-304  
M.Code : 70775

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTION TO CANDIDATES :**

1. SECTIONS-A, B, C & D contains TWO questions each carrying TWENTY marks each and students has 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. What are the various characteristics of Java language? Discuss with the help of suitable examples.
2. Create a DATE class in java having day, month and year data members. Create constructors for initializing data members, functions for validating date, getting values of data members and displaying the date.

**SECTION-B**

3. What is Inheritance? Explain various types of inheritance with suitable examples.
4. What is a Stream? Describe the major tasks of input and output stream classes. Also distinguish between the following:
  - a. InputStream and Reader classes
  - b. OutputStream and Writer classes

**SECTION-C**

5. What is an Applet? What are the types of applets in Java? Explain how parameters are passed to applets?
6. What are the basic steps for using JDBC to access a database? Explain briefly with syntax.

## SECTION-D

7. What are Java Servlets? Explain life cycle of a Servlet.
8. What is a Socket? What is the difference between TCP and UDP sockets? Discuss the various methods associated with TCP and UDP in brief.

## SECTION-E

### 9. Write briefly :

- a) Define method overriding.
- b) Differentiate between Java and C++.
- c) What is Prepared Statement?
- d) What is a Friend function? What is its purpose?
- e) What is the difference between containership and inheritance?
- f) What do you mean by a run-time exception? Do they need to be declared?
- g) What are the advantages of using JSP over Servlets?
- h) What is a Constructor? How is a constructor different from a method?
- i) What are JSP implicit objects?
- j) What is JDBC-ODBC bridge?

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**