

Roll No. ....

## **MCA–16/M. Sc. (IT)–13**

### **Programming in Java**

Master of Computer Applications/

Master of Science in Information Technology

(MCA–11/16, M. Sc. IT–12/16)

Fourth Semester, Examination, 2017

**Time : 3 Hours**

**Max. Marks : 60**

**Note :** This paper is of **sixty (60)** marks containing **three (03)** sections A, B and C. Learners are required to attempt the questions contained in these sections according to the detailed instructions given therein.

### **Section–A**

#### **(Long Answer Type Questions)**

**Note :** Section ‘A’ contains four (04) long answer type questions of fifteen (15) marks each. Learners are required to answer *two* (02) questions only.

1. Explain the following using suitable example :
  - (a) Object
  - (b) Inner classes
  - (c) Abstract class
2. What is JDBC ? Explain various type of JDBC drivers, also explain major design constraints with JDBC.

3. Explain the following terms using suitable example :
  - (a) Polymorphism
  - (b) Encapsulation
4. What do you mean by stream ? Discuss the various types of stream in Java. How files are handled using stream ? Write a program in java to accept employee information (Name, Father's name, Designation, Salary and Employee ID etc.) from console and write back to empDetails.dat file.

### Section-B

#### (Short Answer Type Questions)

**Note :** Section 'B' contains eight (08) short answer type questions of five (05) marks each. Learners are required to answer *four* (04) questions only.

1. Explain Inheritance using suitable example.
2. Write short notes on the following :
  - (a) Strings
  - (b) Vectors
3. What is an Interface ? Explain its significance using suitable example.
4. Differentiate between AWT and swing component. List *three* components from each category.
5. Define exception handling using a suitable example.
6. Explain copy constructor using suitable example.
7. Differentiate between Super Class and Final Class.
8. Explain Structure of a Java Program.

**Section-C**

**(Objective Type Questions)**

**Note :** Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this section are compulsory.

1. Which is a reserved word in the Java programming language ?
  - (a) method
  - (b) native
  - (c) subclasses
  - (d) reference
2. Which is a valid keyword in java ?
  - (a) interface
  - (b) string
  - (c) float
  - (d) unsigned
3. Which is the valid declarations within an interface definition ?
  - (a) public double methoda();
  - (b) public final double methoda();
  - (c) static void methoda(double dl);
  - (d) protected void methoda(double dl);
4. What is the numerical range of a char ?
  - (a) – 128 to 127
  - (b) – (215) to (215) – 1
  - (c) 0 to 32767
  - (d) 0 to 65535

5. You want subclasses in any package to have access to members of a superclass. Which is the most restrictive access that accomplishes this objective ?
- (a) public
  - (b) private
  - (c) protected
  - (d) transient
6. `public class Test { }`  
What is the prototype of the default constructor ?
- (a) `Test()`
  - (b) `Test (void)`
  - (c) `public Test ()`
  - (d) `public Test (void)`
7. Given a method in a protected class, what access modifier do you use to restrict access to that method to only the other members of the same class ?
- (a) final
  - (b) static
  - (c) private
  - (d) protected
8. Java programs perform I/O through \_\_\_\_\_
- (a) I/O methods
  - (b) I/O package
  - (c) streams
  - (d) compiler

9. \_\_\_\_\_ is a feature that allows one interface to be used for a general class of actions.
- (a) Class
  - (b) Inheritance
  - (c) Polymorphism
  - (d) Interface
10. The default package that is implicitly called in a java program is :
- (a) java.Lang
  - (b) java.System
  - (c) java.Window
  - (d) java.Lang.System

