

**MCA (Revised)**  
**Term-End Examination**  
**June, 2007**

**MCS-024 © : OBJECT ORIENTED  
TECHNOLOGIES AND JAVA  
PROGRAMMING**

Time : 3 hours

Maximum Marks : 100

**Note :** Question number 1 is **compulsory**. Attempt any **three** questions from the rest.

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1. (a) What is the difference in call-by value and call-by reference in java ? Give one example of each. 6
- (b) What are the various methods used for Applet initialization and termination ? Explain. 8
- (c) What is the finally block in java ? Explain. 4
- (d) Write a program in java to sort a list of n integers. (Use any sorting method) 6
- (e) What are inner classes in java ? Explain. 5
- (f) What is dynamic method dispatch in java ? Explain. 8
- (g) What are the standard input and output streams in java ? 3

2. (a) Explain suspend( ) and resume( ) functions and how these are used in threading. 8
- (b) What is toString( ) method in java ? How is it used ? 6
- (c) What is Number Format Exception in java ? Explain. 6
3. (a) What are Java Beans ? Describe various features of java beans in short. 6
- (b) What is the use of interfaces in java ? Explain. 6
- (c) Discuss the various access rights used with a class in a java package. 5
- (d) If a derived class contains data and methods with the same name as in its base class, how can we access these base class methods and data ? 3
4. (a) What is an event in java ? How is it handled ? 4
- (b) How is polymorphism implemented in java ? Explain with suitable example. 8
- (c) What are the advantages of servlets ? 4
- (d) What are the cookies ? 4
5. (a) Write an applet in java to display the order of execution of various methods used in applet's life cycle. 6
- (b) Write a program in java to input a string. If input string is not equal to "Java" an exception is thrown called "invalid input". 6

(c) Consider the following class hierarchy.

A  
|  
B  
|  
C  
|  
D

Explain the order of execution of various constructors in classes A, B, C and D with example. 8

