

MCA (Revised)
Term-End Examination
June, 2008

**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.

1. (a) What is bytecode ? Explain the difference between compiled code of Java and compiled code of C. 6
- (b) Write a class complex that represents a complex number with suitable constructors, and a function that multiplies two complex numbers. 8
- (c) What is the difference between method overloading and method overriding ? Explain with suitable examples. 8
- (d) What is classpath ? Explain its use with suitable example. 5
- (e) What is the need of interprocess communication ? How does Java support it ? Explain with example. 8
- (f) Write a program in Java to convert the following string in lower case : "IGNOU". 5
2. (a) What is an abstract class ? How can it be used to implement polymorphism in Java ? Explain your answer with an example. 7

- (b) What is an interface in Java ? What is its role in inheritance ? Explain the difference between interface and abstract class. 8
- (c) What is the finally clause ? Explain its use in Java with example. 5
3. (a) What is multithreading ? What is its need in Java ? How would you add threads to a class that already inherits from a class other than the thread class ? (Explain with examples) 8
- (b) What is StringTokenizer ? What are different instance variables defined in StringTokenizer ? Give an example showing the use of StringTokenizer. 8
- (c) Explain the life cycle of an applet in brief. 4
4. (a) Write a program in Java that reads text from the keyboard and writes it to a .txt file. 8
- (b) What do you mean by the statement, "HTTP is a stateless protocol" ? What are various ways through which you can maintain the state ? (Explain each in brief) 8
- (c) What is the use of finalize() method ? 2
- (d) What is PushbackInputStream ? 2
5. Explain the following with suitable example : 4x5=20
- (a) RMI
- (b) Swing
- (c) Datagrams
- (d) Servlet