

**BT-5 / D-19**  
**JAVA PROGRAMMING**  
**Paper-IT-305N**

*Time allowed : 3 hours]*

*[Maximum marks : 75*

*Note : Attempt five questions in all, selecting at least one question from each unit. All questions carry equal marks.*

**Unit-I**

1. What is the major objective of object-oriented approach ? List some important features of object oriented paradigm. Also list the key advantages and features of Java and highlight its superiority over other programming languages.
2. (a) Describe the concept of objects, classes and constructors in Java.  
(b) What purpose is served by String Class in Java ?

**Unit-II**

3. What are the reasons due to which exception can occur ? List some common type of exceptions that might occur in Java. Also define try and catch blocks with examples. How can one create own exceptions in Java ?
4. What is the advantage of multithreaded programming in Java ? What are the stages of the life cycle of a thread ? Show how threads are created by extending a thread class. When does a Java multithreaded program suffer from a deadlock condition ?

**Unit-III**

5. How do applets differ from applications ? Describe the life cycle of an Applet. Write the steps involved in developing Applets and show how an Applet is inserted in a web page ?
6. What do you mean by the terms 'Relational Database' and 'JDBC' ? What are the uses of JDBC ? Depict the JDBC-to-database communication path. What activities can be performed using JDBC API ?

**Unit-IV**

7. Give a brief overview of the following in the context of Event handling :
  - (a) The Event handling process.
  - (b) Event classes
  - (c) The Delegation Event model
8. What are Servlets in Java ? What services are provided by Servlets to Web application development ? Explain Servlet lifecycle and the methods of javax.servlet interface.