(i) **Printed Pages : 3**   Roll No. ....

(ii) **Questions   : 9**   **Sub. Code :** 3 6 1 2

Exam. Code : 0 4 6 0

M.Sc. Information Technology 2ⁿᵈ Semester

(2054)

ADVANCE JAVA AND NETWORK PROGRAMMING

Paper : M.S.-45

Time Allowed : Three Hours]   **[Maximum Marks : 80**

Note :— Attempt *five* questions in all by selecting *one* question each from Units I, II, III and IV. Question No. IX is compulsory. All questions carry equal marks.

UNIT—I

I. (a) What is Multithreading ? What are the ways to create multiple threads in Java ?

   (b) Explain Thread Life Cycle.   8+8

II. (a) What is the difference between AWT and Swings ?

   (b) Write a GUI program using components to find sum and difference of two numbers. Use two text fields for giving input and a label for output. The program should display sum if user presses mouse and difference if user releases mouse.   8+8

UNIT—II

III. (a) Explain Java's Database connectivity and prepared statements with the help of suitable examples.

   (b) Explain different types of JDBC drivers.   8+8

IV. (a) Explain RMI architecture. What are the services in RMI ?

   (b) Explain the layers of RMI architecture.   8+8

UNIT—III

V. (a) What are the steps for establishing a TCP connection between two computers using sockets ?

   (b) What is the difference between CGI and servlet ? How do servlets handle multiple requests ?   8+8

VI. (a) What are the differences between a TCP socket and UDP socket ? How are they created in Java ?

   (b) Differentiate between :

      (i) Generic servlet and HttpServlet.

      (ii) PrintWriter and ServletOutputStream.   8+8

UNIT—IV

VII. (a) What are Java Beans ? What are the advantages of using Java Beans ? Also explain JavaBeans API.

    (b) What is the serializable class in Java Beans ? How do you control serialization in Java Beans ?   8+8

VIII.(a) Explain JSP architecture.

(b) Explain implicit objects in JSP. 8+8

IX. Compulsory Questions :

(a) Give two advantages and two disadvantages of Java Sockets.

(b) What is synchronization with respect to multithreading ?

(c) What is static in Java ?

(d) What is the difference between wait( ) and sleep( ) methods in Java ?

(e) Explain the concept of garbage collection in Java.

(f) What is an event ? Which package is used to provide event classes ?

(g) What is JVM ?

(h) What is the difference between a window and a frame ?

8×2