

**NRT/KS/19/2127**

**Bachelor of Science (B.Sc.) Semester—IV Examination**  
**COMPUTER SCIENCE (JAVA PROGRAMMING)**  
**Optional Paper—I**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

**EITHER**

1. (A) What is JVM ? Explain different features of Java Language. 5  
(B) Write a Java program to display the total and average of three numbers. 5

**OR**

- (C) Explain different operators supported by Java programming. 5  
(D) Explain Input statement for entering data through keyboard. 5

**EITHER**

2. (A) Give the difference between method overloading and method overriding. 5  
(B) Write a Java program to demonstrate single inheritance. 5

**OR**

- (C) What is interface in Java ? Give example to implementing interface. 5  
(D) Write a Java program to demonstrate the static method. 5

**EITHER**

3. (A) What is thread ? Explain the life cycle of thread. 5  
(B) Explain exception handling with suitable example. 5

**OR**

- (C) What is API package in Java ? Explain how a class is added to package. 5  
(D) Write a Java program to create an applet that receives three numeric value as input from user and display the largest of three. 5

**EITHER**

4. (A) Explain input and output stream in Java. 5  
(B) Write a Java program to copy characters from one file to another file. 5

**OR**

- (C) What is event driven programming ? Explain with example. 5  
(D) Explain graphics object. Write a program that create Java application for drawing rectangle on frame. 5

5. (A) Difference between applets and application. 2½  
(B) Short note on constructor overloading. 2½  
(C) Draw life cycle of applet. 2½  
(D) What is layout manager ? Give its type. 2½