

2012

Bachelor of Computer Application

Fifth Semester

BCA-16-503: Java Programming

Time allowed: 3 Hours

Max. Marks: 65

**NOTE:** Attempt five questions in all, including Question No. 9 (Unit-V) which is compulsory and selecting one question each from Unit- I-IV

x-x-x

**Unit-I**

1. a) Write notes on following:
  - (i) Byte Code (ii) Java Virtual Machine (iii) Java Development Kit (6)
- b) Explain the concept of Constructors in Java with suitable examples. (7)
2. a) What is method overriding? Write a program in java to illustrate the concept of method overriding. (9)
- b) Explain the concept of dynamic method dispatch. (4)

**Unit-II**

3. a) How to implement interfaces in Java? Explain with suitable example. (9)
- b) What is the difference between String and String Buffer class? (4)
4. a) What are packages? What are their types? How do you use them in Java program? (9)
- b) Write short notes on two-dimensional Arrays. (4)

**Unit-III**

5. What are the various ways to create a Thread in Java? Also explain the Java thread model. (13)
6. Write a Java applet to draw various shapes like rectangles, ellipse, arcs and polygons? Compare and contrast applets and application programs. (13)

**Unit-IV**

7. What is AWT in Java? Explain any five AWT controls with the help of Java program. (13)
8. What is the use of JDBC? Write the steps to select and update record in database using JDBC. (13)

**Unit-V**

9. a) What are Layout managers in Java? (2)
- b) What are the various applications of Java? (2)
- c) What is the functionality of static class? (2)
- d) What is abstract class? (2)
- e) What is the importance of init() method in Applet? (2)
- f) What is synchronizations in multithreading? (3)

x-x-x