





### SECTION-B

2. What are Constructors? Discuss its features and various types. Also write Java program for parameterized constructor.
3. How E-Mail works? Discuss.
4. What is Inheritance? Explain its different types. Also write Java program to implement multiple inheritance.
5.
  - a) What are different search strategies used in search engines? Explain.
  - b) Write a note on WWW.
6. Discuss IP Addresses in detail.
7.
  - a) How can we handle Exceptions in Java? Discuss.
  - b) What is Event Handling in Java? Discuss.



### SECTION-B

2. How Object Oriented Paradigm is different from structural programming? Also discuss the benefits and applications of OOP.
3. What is method overloading? How it is different from method overriding? Explain with an example.
4. Write a program to implement Multiple Inheritance using Interfaces. Also explain the process.
5. How Applets differ from applications? Explain Applet life cycle as well.
6. Explain various components of Event handling.
7. Write a program to demonstrate the use of File & data Input/ Output stream.



## SECTION-B

2. What are the various primitive data types available in Java? Also specify memory requirements and range of each.
3. What are classes and objects? How are classes and objects created in Java? Explain with syntax and example.
4. What are packages? How are packages created and implemented in Java? Explain in detail with syntax and example.
5. What are applets? How do they differ from application programs? Discuss the steps involved in creating and running an applet.
6. Explain the exception handling mechanism of Java. Name a few exception handling classes.
7. What is AWT? Briefly explain various AWT controls available in Java.





### SECTION-B

- 2) Discuss security issues in Internet.
- 3) How Java is different from C++? Explain with examples.
- 4) Define Constructor. It is possible to overload a constructor. Justify your answer using example.
- 5) How do you define a class in Java? How do you create its instances and refer to them?
- 6) Discuss looping controls available in Java. Give examples.
- 7) What do you know about multithreading? How it is implemented in Java?



## SECTION-B

2. What is Object-Oriented Programming? Discuss the benefits of OOP.
3. What are the various data types available in Java? Explain.
4. What is Inheritance? What are the different forms of inheritance in Java? Explain with suitable examples.
5. What is an exception? How is it different from an error? Is it possible to include your own exception in a program? Explain with suitable code for the purpose. Also discuss the use of finally block.
6. What do you mean by a Java applet? How is an applet different from an application? Discuss the life cycle of an applet.
7. Explain with examples the various graphics methods supported by AWT.



## SECTION-B

2. Differentiate between C, C++ and Java.
3.
  - a) Write various steps to develop compile and run Java program.
  - b) Write a note on Random Access File.
4. How can we implement multiple inheritance in java? Explain with example.
5.
  - a) What are various advantages of using Package in java?
  - b) Differentiate between Applet and Applications.
6. What are constructors? Write down its various features and different types. Also write example for Parameterized constructor.
7. What are various techniques to handle Exceptions in Java? Explain with example.

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Questions: 07

Total No. of Pages: 02

**BCA (Sem. 5)**  
**PROGRAMMING IN JAVA**  
**Subject Code: BSBC-502**  
**Paper ID: B1155**

Time: 3 Hrs.

Max. Marks: 60

**INSTRUCTIONS TO CANDIDATES:**

1. Section A is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. Section B contains **SIX** questions carrying **TEN** marks each and students have to attempt any **FOUR** questions.

**SECTION A**

**1. Write briefly:**

- a) What is an object? How we create it?
- b) What is Java Virtual Machine?
- c) What are various types of arrays? Give syntax of creating each of them.
- d) Write steps to create a package.
- e) Name various branching statements of java.
- f) What are wrapper classes?
- g) Demonstrate how parameters are passed to an Applet.
- h) Use of control loops in Applets.
- i) Why Exception handling is done?
- j) What is Java AWT?

**SECTION B**

2. Explain the difference of various looping statements with the help of appropriate examples. What are labeled loops?

3. What is method overloading? How it is different from method overriding? Explain with an example.
4. Write a program to implement Multiple Inheritance using Interfaces. Also explain the process.
5. Why Exception handling is required? How it is done?
6. Explain Event delegation. How Action listener class is implemented?
7. Write a program to demonstrate the use of File & data Input/ Output stream.

**Total No. of Questions: 07**

**BCA (2011 & Onward) (Sem. – 5)**

**PROGRAMMING IN JAVA**

**M Code: 70629**

**Subject Code: BSBC-502**

**Paper ID: [B1155]**

**Time: 3 Hrs.**

**Max. Marks: 60**

**INSTRUCTIONS TO CANDIDATES:**

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **SIX** questions carrying **TEN** marks each and students have to attempt any **FOUR** questions.

**SECTION A**

1. Briefly answer the following:

- a) Differentiate between Java and C++.
- b) What do you mean by constructor overloading?
- c) What are Final variables and methods?
- d) What are Jagged arrays?
- e) What are Vectors in Java? What is its purpose?
- f) Explain the term polymorphism?
- g) What is an abstract class?
- h) Why Java is called platform independent?
- i) What is Java virtual machine?
- j) What is a Package? What is the use of Packages in Java?



### SECTION B

2. What is object-oriented programming? Discuss the basic concepts of object-oriented programming.
3. What are the various looping statements available in Java? Discuss any one with suitable example.
4. Create a Date class in Java having day, month and year data members. Create constructors for initializing data members, functions for validating date, getting values of data members and displaying the date.
5. Define an Applet. How is an Applet different from an application? Describe the lifecycle of an applet.
6. Explain with examples, the various graphics methods supported by AWT. How color of an object can be changed?
7. Describe the Delegation Event Model. What are the Event Sources and Event Listeners? Explain with an example Java code, how various mouse events are handled?

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 07**

**BCA (2013 & Onward) (Sem.–5)**  
**PROGRAMMING IN JAVA**  
**Subject Code : BSBC-502**  
**Paper ID : [B1155]**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTION TO CANDIDATES :**

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **SIX** questions carrying **TEN** marks each and a student has to attempt any **FOUR** questions.

## SECTION-A

**Q1. Answer briefly :**

- a) Write the structure of a typical Java program.
- b) How command line arguments are passed in a Java program?
- c) What is the difference between a class and an object?
- d) How arrays are declared in a Java program?
- e) What are parameterised constructors?
- f) What are overriding methods?
- g) When do we use protected access specifier?
- h) What is an Applet? How is an applet different from an application?
- i) What is Inheritance? What are the different forms of inheritance in Java?
- j) What is CLASSPATH?

## SECTION-B

- Q2. Discuss the salient features of Java programming language. How Java is different from C and C++?
- Q3. What are the various operators available in Java? Discuss each with an example.
- Q4. a) What is Interface in Java? How is interface implemented?
- b) What is an abstract class? What is its use in Java?
- Q5. What is an Exception? What are the types of exceptions? Discuss in detail exception handling in Java.
- Q6. Create an applet that receives three numeric values as input from the user and then displays the largest of these on the screen. Write a sample HTML page to include this applet.
- Q7. Explain with examples the various methods supported by the Graphics class.



## SECTION-B

2. Explain following :
  - a) Constructors and its syntax
  - b) Methods Overloading
3. Discuss various loop statements and branching statements available in Java? Show their syntax.
4. How do we create a Java applet? Discuss its life cycle showing passing parameters to Applets.
5. What is error and exception handling in Java? How would you handle the exception using *Try* and *Catch*?
6. Explain Java AWT basics. Explain the syntax of *TextArea* layout in AWT package.
7. What are the inbuilt streams available in Java I/O package? Discuss data I/P and O/P streams.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**