

Total number of printed pages-3

44 (5) BCA-HC-5016

2023

JAVA PROGRAMMING

Paper : BCA-HC-5016

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Briefly answer the following : **(any ten)**
 $2 \times 10 = 20$
 - (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.

Contd.

- (g) What is an abstract class ?
- (h) Why is Java called platform independent ?
- (i) What is Java virtual machine ?
- (j) What is a Package ? What is the use of Packages in Java ?
- (k) Explain Destructor.
- (l) What are different types of errors ?
- (m) What are Byte Codes ?

2. Answer **any four** questions : $5 \times 4 = 20$

- (a) What is object-oriented programming ? Discuss the basic concepts of object-oriented programming.
- (b) What are the various looping statements available in Java ? Discuss *any one* with suitable example.
- (c) What are the various primitive data types available in Java ? Also specify memory requirements and range of each.
- (d) Explain the exception handling mechanism of Java. Name a few exception handling classes.

- (e) What are classes and objects ? How are classes and objects created in Java ? Explain with syntax and example.

3. Answer **any two** questions : $10 \times 2 = 20$

- (a) 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.
- (b) Define an Applet. How is an Applet different from an application ? Describe the lifecycle of an applet.
- (c) Explain with examples, the various graphics methods supported by AWT. How can color of an object be changed ?
- (d) What are packages ? How are packages created and implemented in Java ? Explain in detail with syntax and example.