

[Time:2.30 Hrs]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. All question are compulsory.
 2. Figures to the right indicate full marks.
 3. Students answering in the regional language should refer in case of doubt to the main text of the paper in English.

Q.1 Attempt any three of the following. 15

- a. Write in detail about different types of operators in Java. Give example for each.
- b. Explain Java architecture and its components.
- c. List and explain salient features of Java.
- d. How main() method is written in Java? Give an example.
- e. Briefly explain the basic concepts of OOPs.
- f. Explain Auto boxing in detail.

Q.2 Attempt any three of the following. 15

- a. What do you mean by method overloading?
- b. Write a short note on Access specifiers in Java.
- c. Explain the need of variable arguments with help of an example.
- d. When do we use keywords final and static? Explain the working of static member functions.
- e. Explain foreach loop with proper example.
- f. Write a short note on Garbage collection in Java.

Q.3 Attempt any three of the following. 15

- a. Explain any five-default package available in Java.
- b. Compare Classes with interfaces in Java.
- c. Define Inheritance. Explain each type with an example.
- d. Explain the following with example. i) **this** keyword ii) **super** keyword
- e. Write a program to illustrate the concept of abstract method and abstract class.
- f. How do you create your own package and import it in a Java program?

Q.4 Attempt any three of the following. 15

- a. Explain Exception Handling in Java.
- b. Explain Life cycle of Thread in Java with neat, labelled diagram.
- c. Explain the use of enumeration data types in Java.
- d. Define Stream. Explain how we can write binary data to a file.
- e. What are the different ways to create thread in Java?
- f. What is Vector? Explain any five vector methods with their functionality.

Q.5

Attempt any three of the following.

15

- a. Write a short note on Delegation Event model in Java.
- b. What is an Applet? Explain its life cycle in Java.
- c. What is Layout manager in Java? Explain any two layouts in Java.
- d. Explain any two listener classes in detail.
- e. Explain <APPLET> and <PARAM> tags with their attributes.
- f. Write about: Button, TextField and Label controls.
